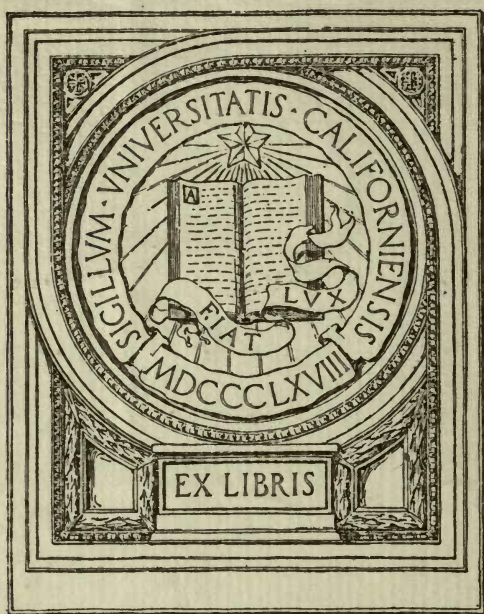


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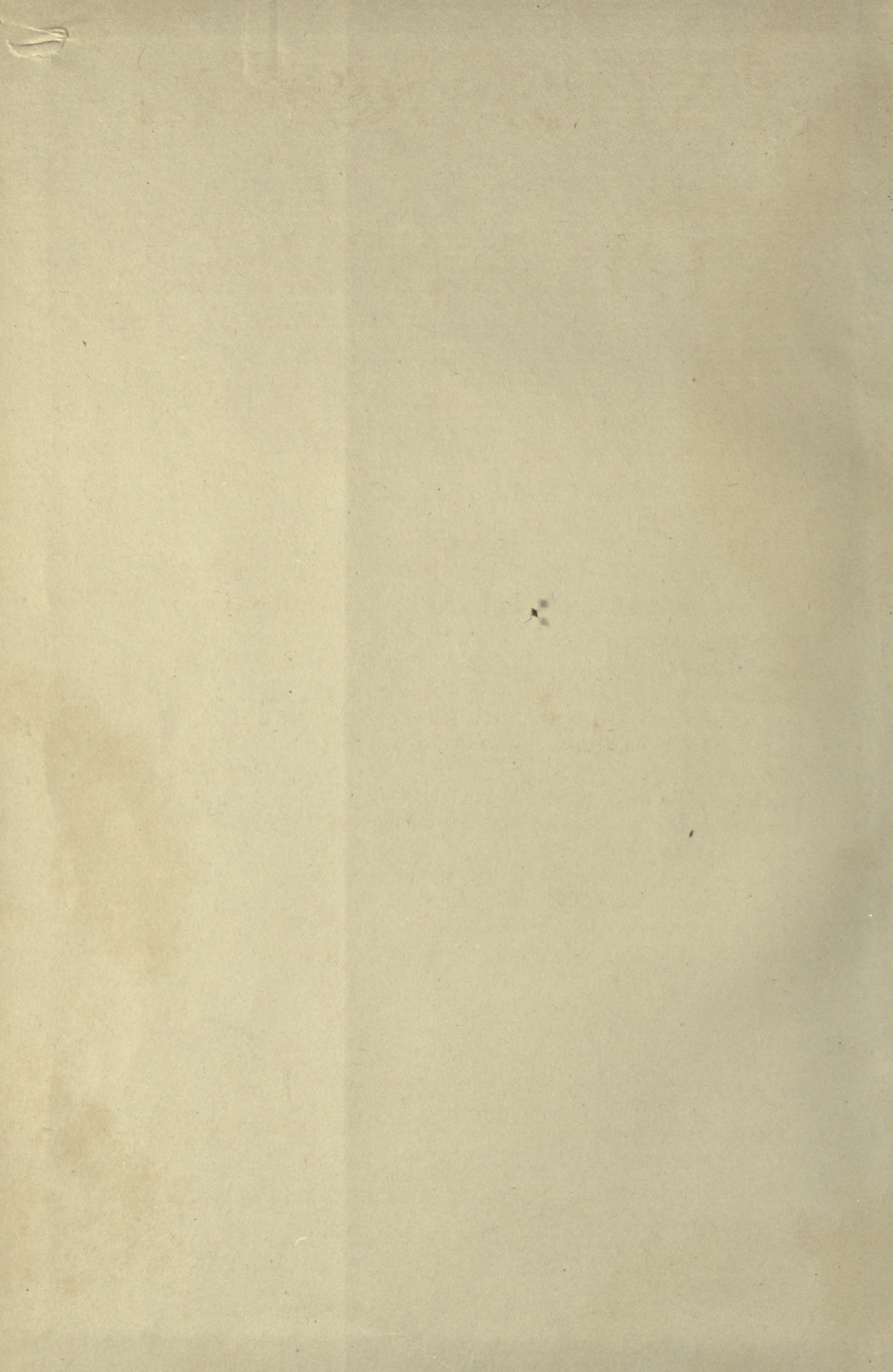


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ANNOTATION LABEL

For explanation of cryptic abbreviations used, see early pp. vol. 2 (following "Preface") also p. 1073 of this vol.





# AMERICAN PLANTS

Botany of  
Southern California

---

VOLUME THREE

1912

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## CONTENTS:

[OF VOLUMES ONE, TWO AND THREE.]

### BOTANY OF SOUTHERN CALIFORNIA

Abbreviations used arbitrarily in this work, pages 372, 411, 1073.

Algae credited to the coast of California, Anderson, Cleveland, Snyder, 392.

Alphabetical index—chiefly of Californian plants, 445, 789.

Among the wild flowers of San Diego, James S. Lippincott, 401.

Analytical key to families represented in California, 385.

Bibliography 1074.

Coniferous trees and shrubbery of San Diego county. 404.

Descriptions of genera, species and varieties credited to South California.

Flowerless Plants of the U. S. 991,

Glossary of some botanical terms used in this work, 375.

Grasses—descriptions of some western species, 411.

Lichens—species occurring in West America, 240, 367, 400.

Mexican Ferns 1042; Fungi 1072; Grasses 1046; Lichens 1050; Plants 1056.

Plant identification, 375.

Some native flowering shrubs, 408.

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Charles Russell Orcutt, Editor.

San Diego, California.

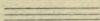
TO  
OLIVE EDDY ORCUTT

Whose rash promise to read whatever the author might write has been  
faithfully kept thru many dreary proofs, this volume is inscribed.



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# AMERICAN PLANTS

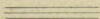


VOLUME THREE



CHARLES RUSSELL ORCUTT

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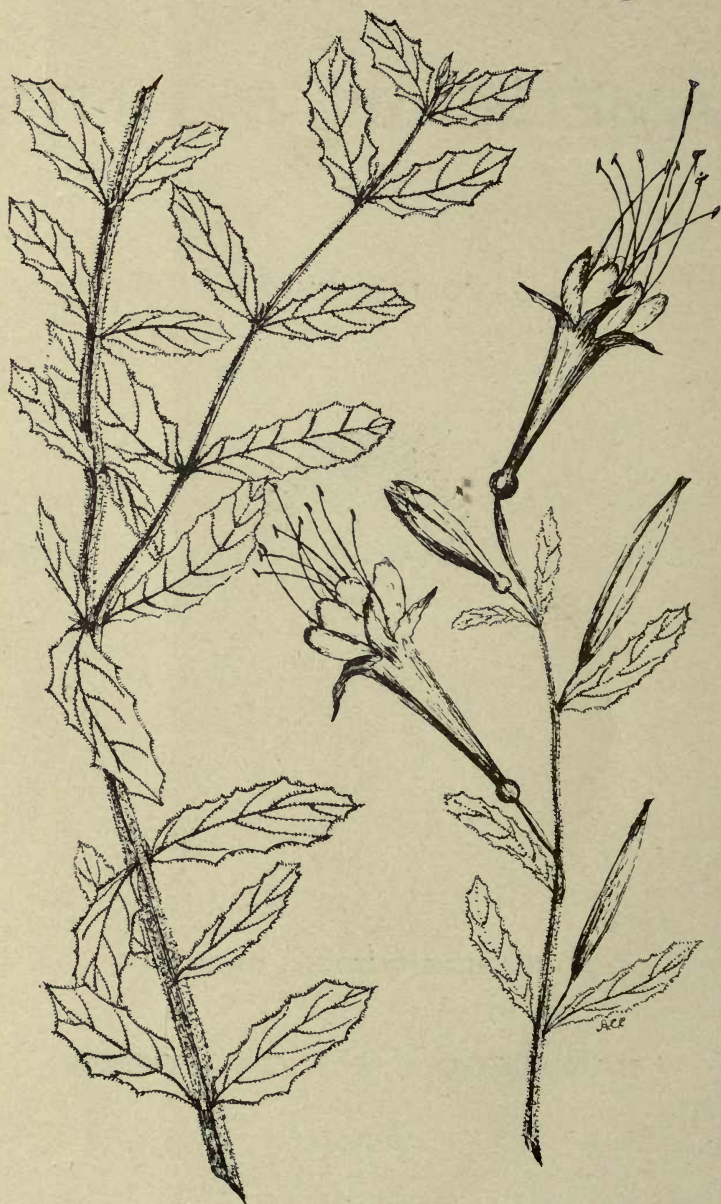
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AMERICAN PLANTS: Plate 12

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**ZAUSCHNERIA ARIZONICA** Davidson  
(Courtesy of the So. Cal. Acad. Sci.)





ASTER GREATAI Parish

(Courtesy of the So. Cal. Acad. Sci.)



**SCROPHULARIA GLABRATA** Davidson

(Courtesy of the So. Cal. Acad. Sci.)





CALOCHORTUS STRIATUS Parish  
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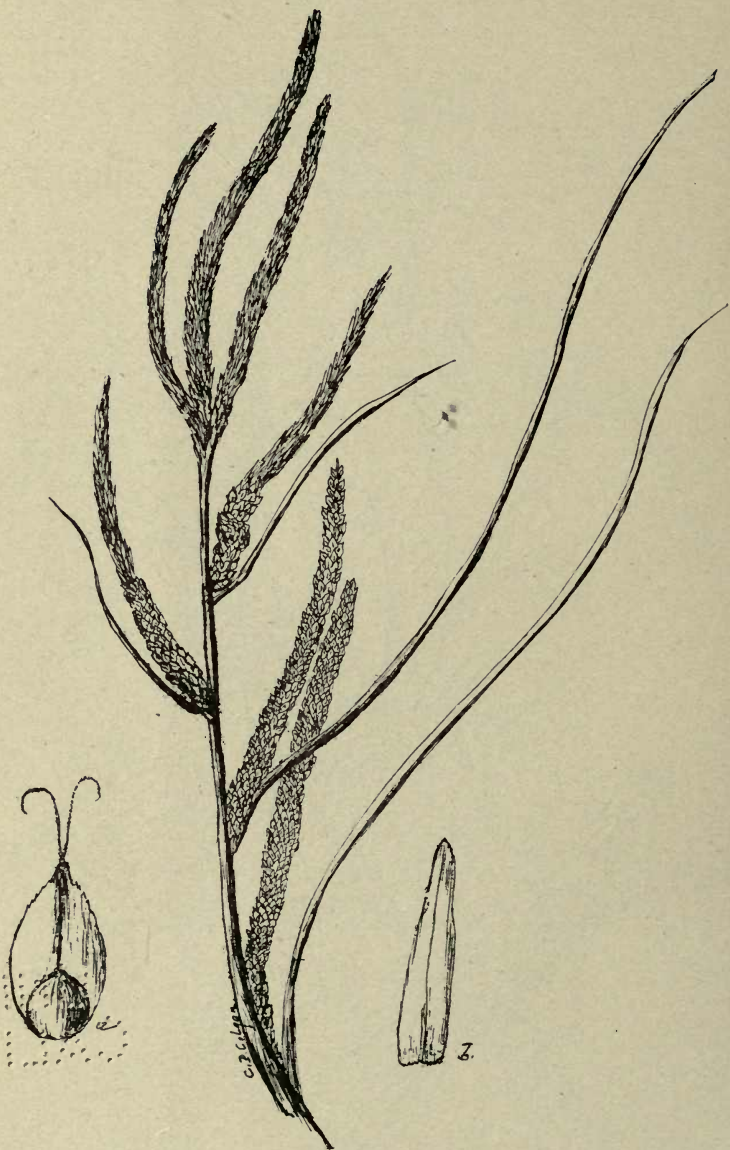
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CAREX BARBARAE Dewey  
(Courtesy of the So. Cal. Acad. Sci.)

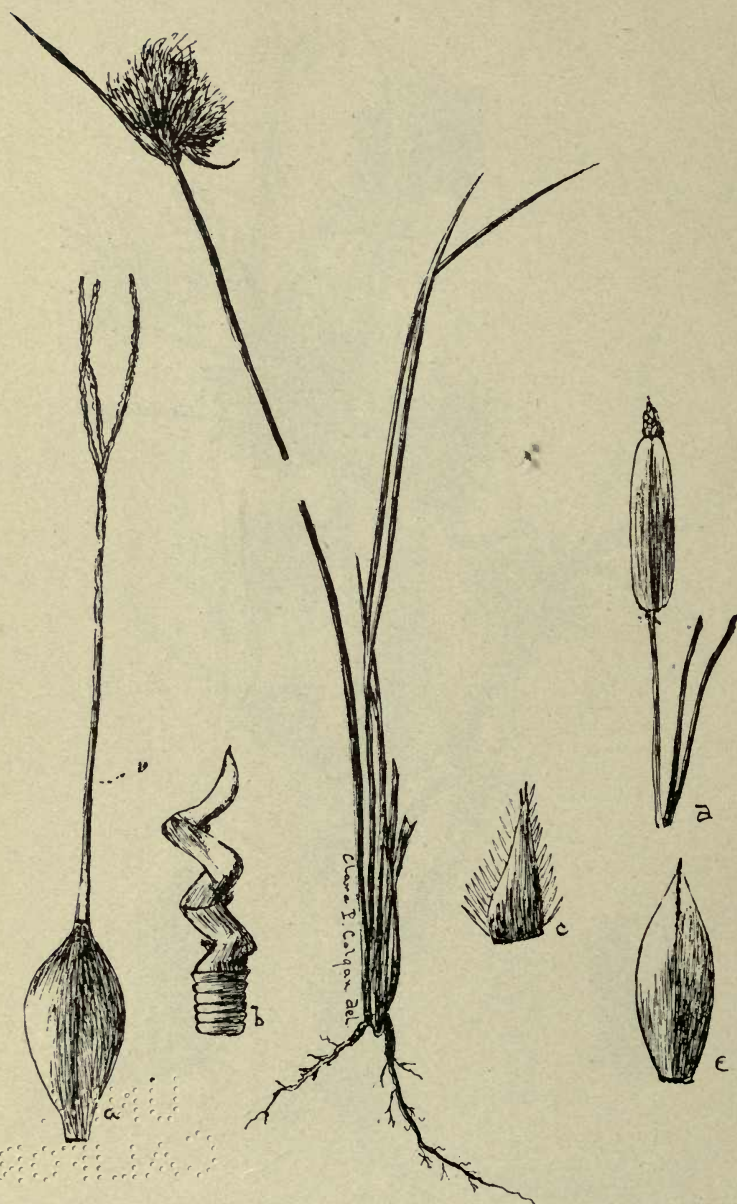




*Cyperus longispicatus*, Norton

CYPERUS LONGISPICATUS Norton

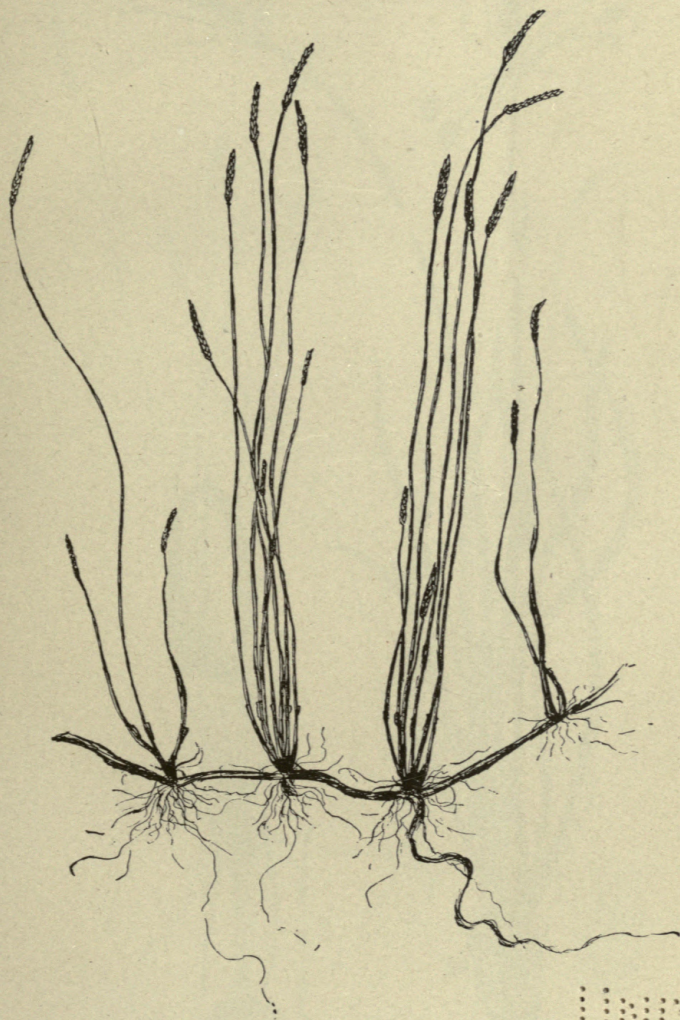
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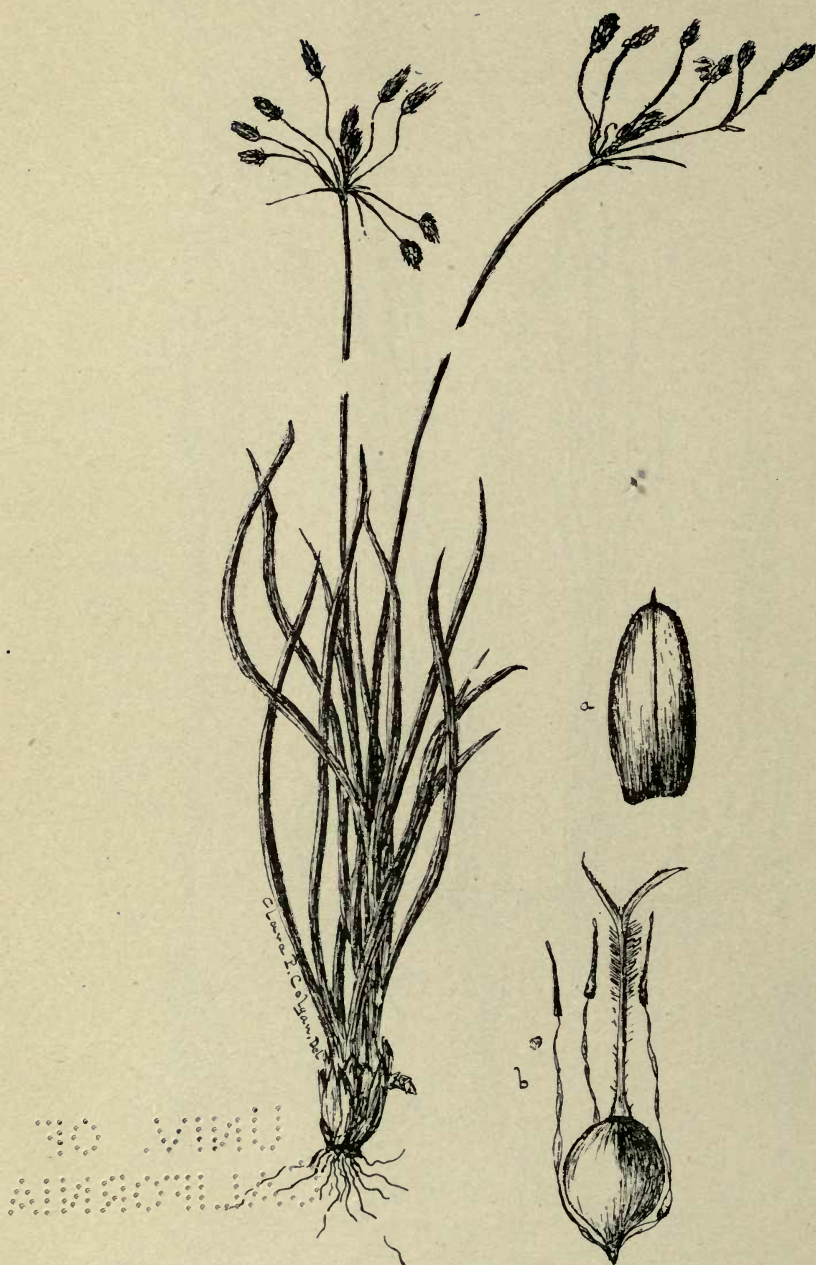




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SCIRPUS PACIFICUS Britton

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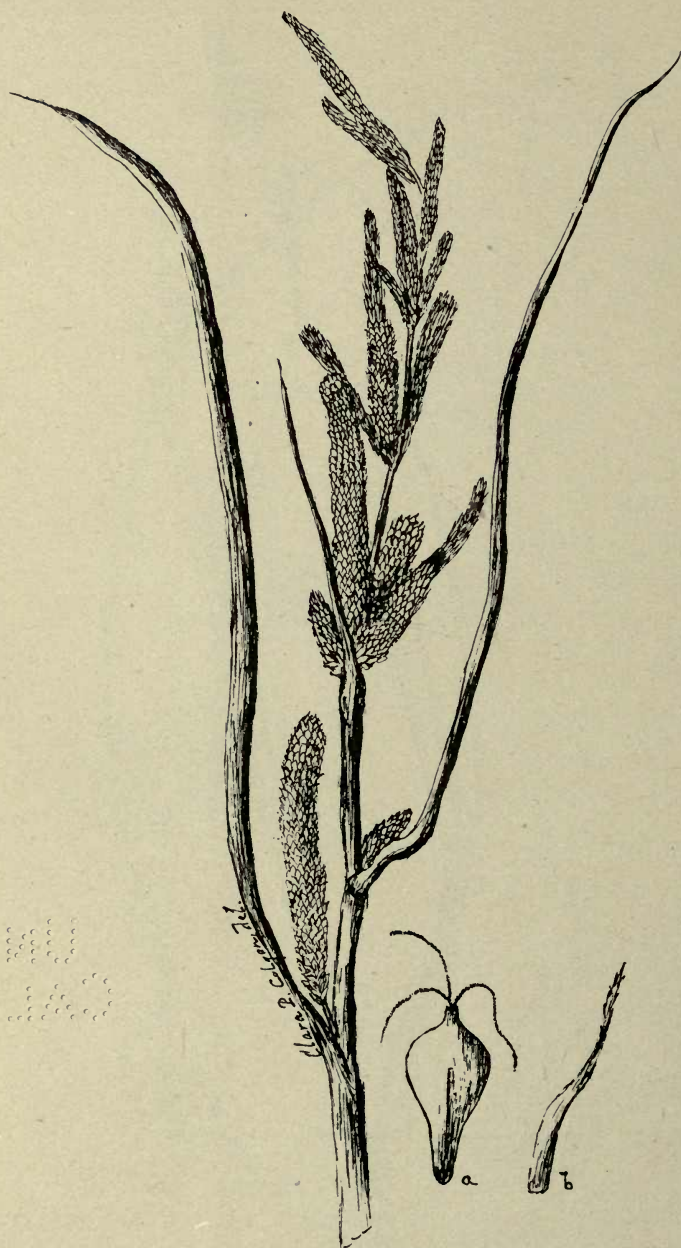




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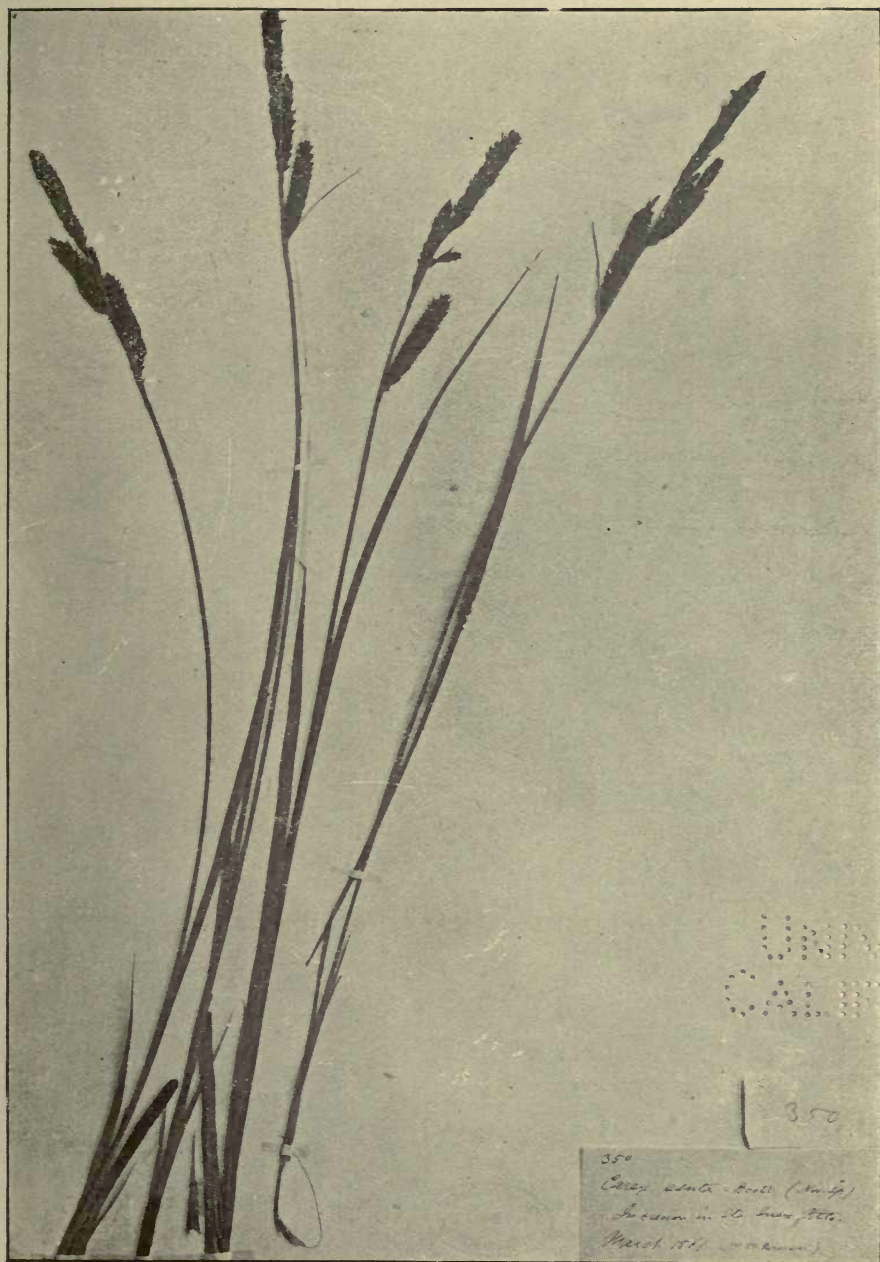
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1914





PLANTS OF SOUTHERN CALIFORNIA  
as determined by  
*Carex bernardina*, N. S. P.  
Michx. Kl. 1897  
No. 10000 - 10001  
Number 10000 - 10001

CAREX BERNARDINA Parish  
(Courtesy of the So. Cal. Acad. Sci.)

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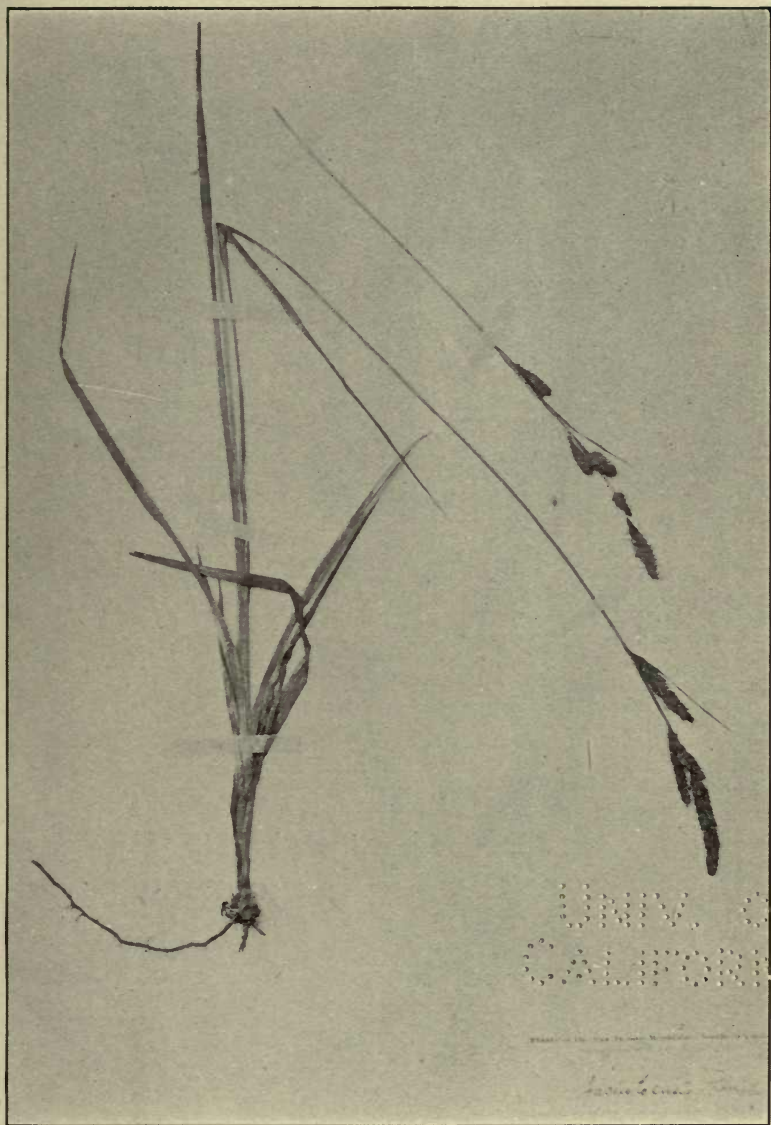


CAREX AUSTROMONTANA Parish

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THE NEW  
AMERICAN





*CAREX JACINTOENSIS* Parish  
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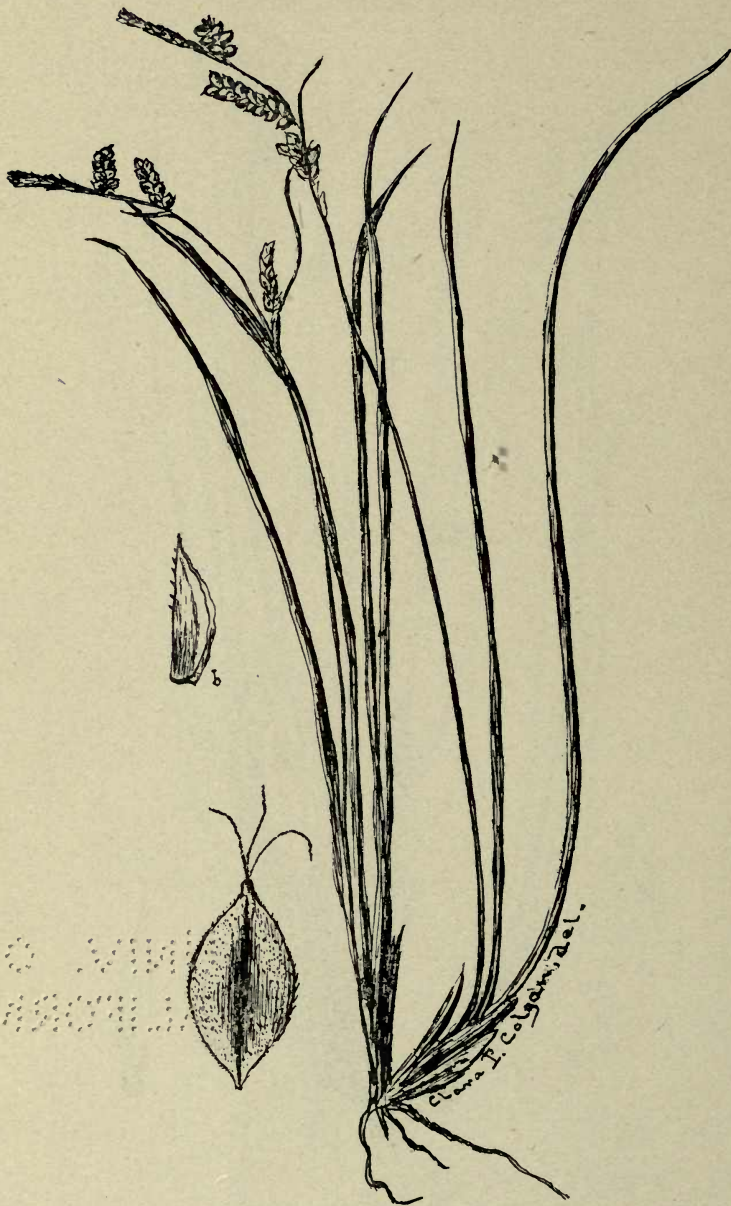
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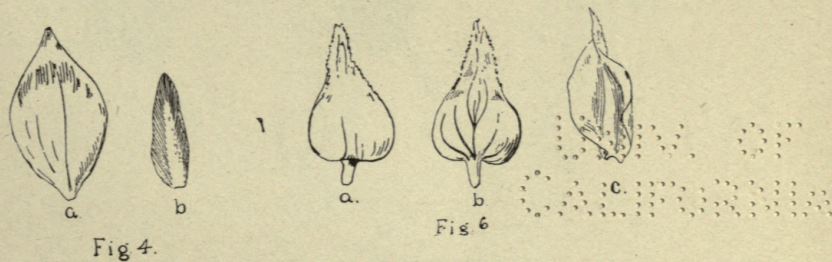
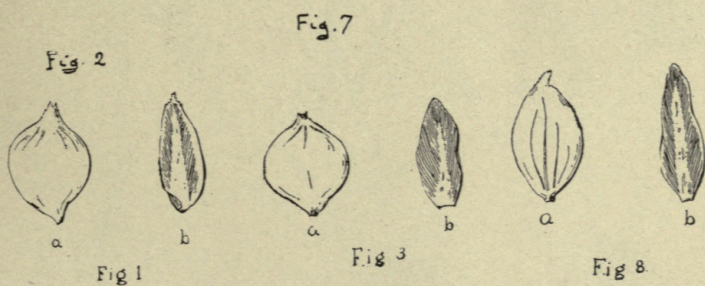
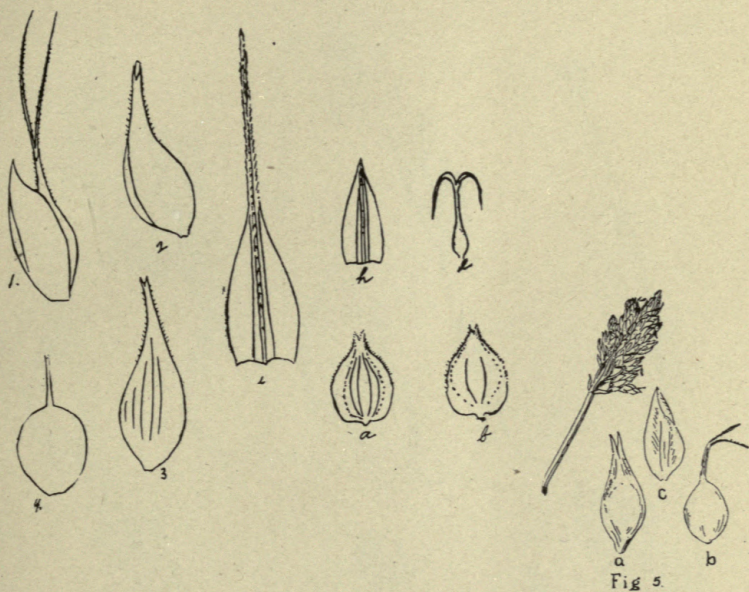
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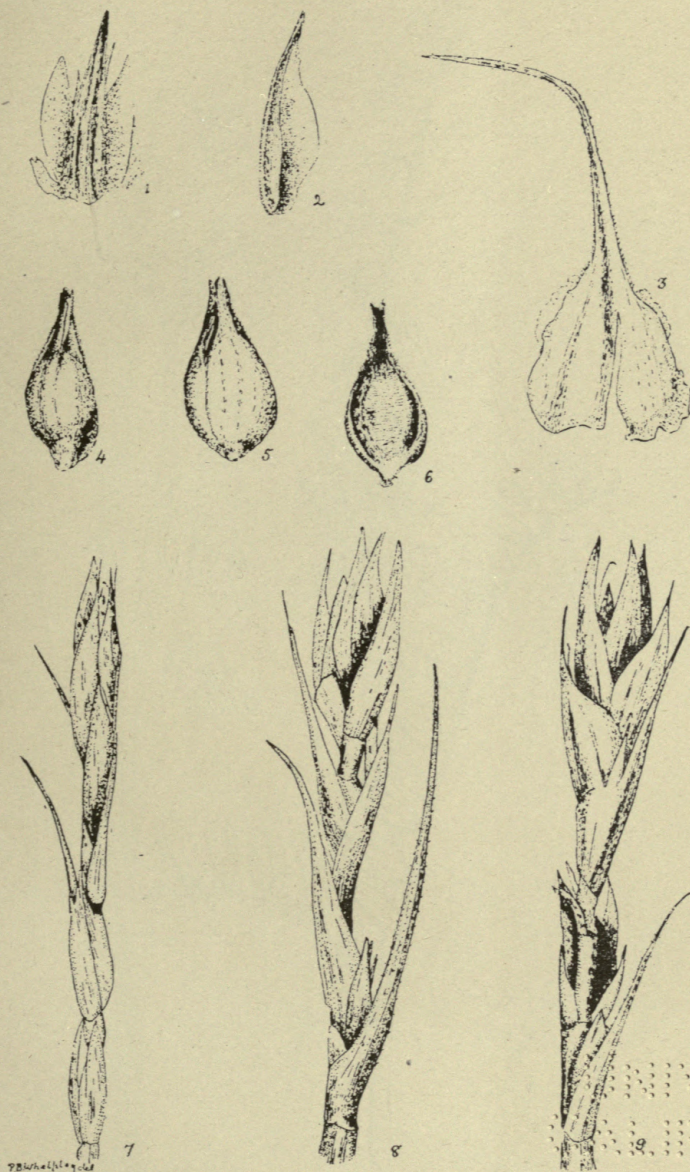
CAREX SPECIES

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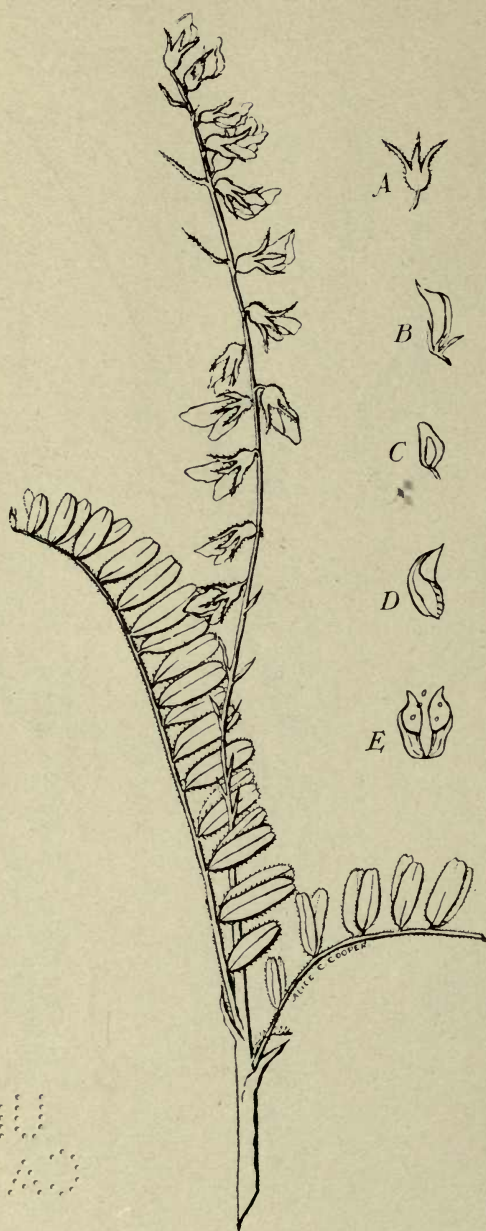
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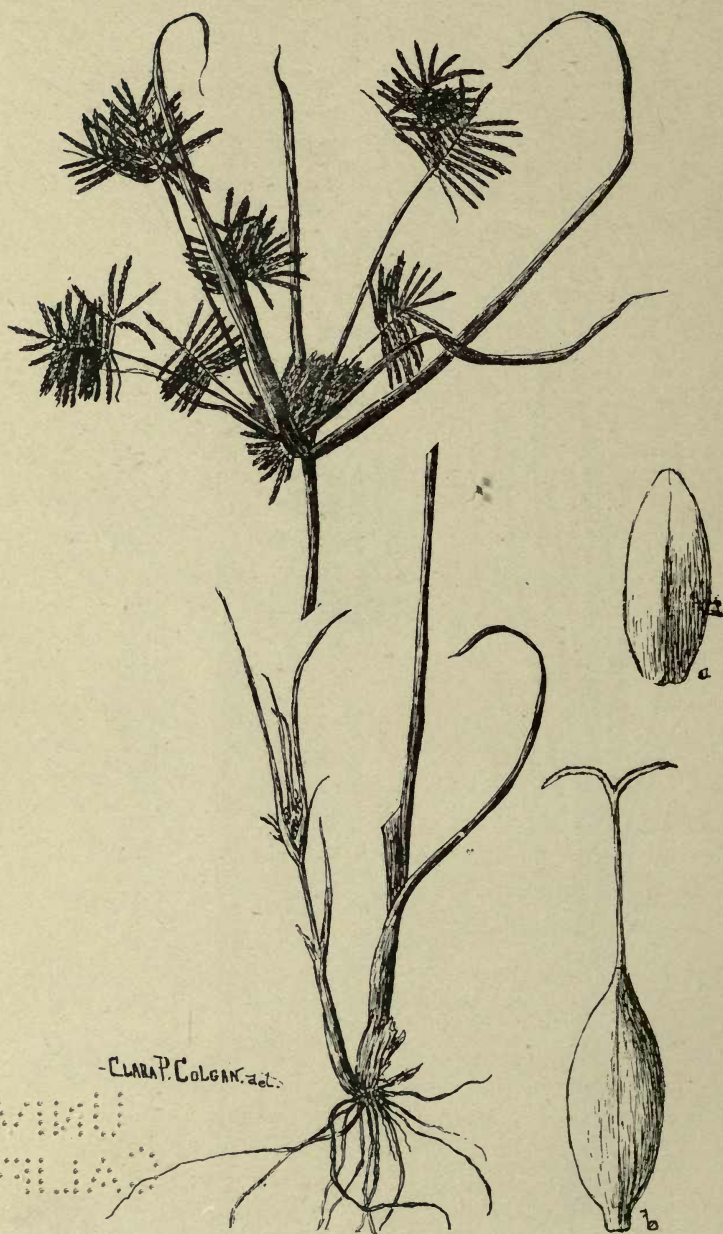
ASTRAGALUS BRAUNTONII Parish  
(Courtesy of the So. Cal. Acad. Sci.)





**CYPERUS BROMOIDES** Britton

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CYPERUS PARISHII Britton

(Courtesy of the So. Cal. Acad. Sci.)



## AMERICAN PLANTS

## Volume III. Part 3.

## Alphabetical Index.

**ABIES MAGNIFICA**

Parish, SCAB 2:155 shows the report of this from Jac to be an error.

**Genus ABRONIA Jussieu.**

**ABRONIA CARLETONI** Coult et Fish, bot gaz 17:349 (1892). Colo.

**ABRONIA PAGONANTHA** Helmerl, bot Jahrb 11:87 (1890). Cal.

**ABRONIA SUESDOERFII** Coult et Fish, bot gaz 17:338 (1892).

**Genus ACALYPHA Linnaeus.**

**ACALYPHA ALIENA** Br 3:172 (1891). Cal.

**ACOMASTYLIS** G lfts 1:174.

**A. DEPRESSA** G lfts 1:174. Wash.

**A. GRACILIPES** Glfts 1:174 based on

*Potentilla* g (Piper, in T cl b xxvii.).

**A. ROSSII** G lfts 1:174 based on Geum

R (Seringe, in DC).

**A. SERICEA** G lfts 1:174 based on

Geum s.

**A. TURBINATA** Glfts 1:174 based on

Geum t (Rydb).

**ACAMPTOPAPPUS** G 8:634 (1873).=

*Aplopappus* Cass fide IK.

**A. SHOCKLEYI** G 8:208.

**A. SPHAEROCEPHALUS** G 8:634. B

1:304. Da 8.

Arizona; Utah; Mohave; CD. Da 8.

**Genus ACER Tournefort.**

Fls polygamous, clustered or racemose; pet com 5-8 or 0; sta 4-12; lvs simple, palmately lobed.

**Genus ACHILLEA Linnaeus.**

**ACHILLEA MILLEFOLIUM** Linn.

"Used by the natives in the form of a

poultice, for healing indolent ulcers.

The fresh plant is also used for

staunching blood in recent wounds"

(Mrs. Bingham).

**A. SUBALPINA** Glfts 1:145. Colo.

**ADENOSTEGIA** Bth. = *Cordylanthus*

fide IK.

**A. ORCUTTIANA** OK. = C: O.

**A. ORCUTTIANA** P 2:181. = C: O.

**A. ORCUTTIANA** West, in Engl et

Prantl Nat Pfl 4:3 b; 98. = C: O.

**Genus AGAVE Linnaeus.**

Perianth cor-like, funnel-shaped, 6-

parted, persistent; sta exserted; anth

linear, versatile; sty filiform, exserted;

stig 3-angled or 3-lobed; cap coriaceous,

3-lobed, 3-celled, loculicidally 3-valved,

many-seeded; sds flat, bk, shining, s-

tached to central placentae; scape

bracted; lvs fleshy, spiny or cartilagin-

ous on margins; fls in simple or panicle

spk, bracted.

**AGAVE ENGELMANNI** Trelease.

**AGAVE HORRIDA** Lem.

Agave Gilbeyi Hort, Gard Chron (1873)

1305.

**AGAVE HUACHUCENSIS** Baker.

**AGAVE MARGARITAE** Brandegees.

Introduced from the islands off Lower California, and one of the handsomest of the smaller growing agaves.

**AGAVE MICRACANTHA** Slim-Dyck.

**AGAVE PALMERI** Engelm.

Very symmetrical; mountains of south-

ern Arizona and New Mexico.

**AGAVE PARRYI** Engelm.

**AGAVE SCHOTTII** Engelm.

**AGAVE SCOLYMUS** Karw.

**AGAVE STRIATA** Zucc.

**AGAVE TRELEASII** Toumej.

**AGAVE UNIVITTATA** Haw.

**AGERATUM** L, Gen ed 1, 247 (1737).

Receptacle always naked; hds many-

fid; inv nearly hemispherical; scales

num, imbricated; ak 5-angled; lvs opp,

toothed; fls blue on p; pap cup-shaped,

truncate or more or less prominently

toothed, of 5-10 distinct scales.

**A. LINEARE** Cav, Ic 3:3 t 205. B 1:388

as *Palafoxia linearis*.

**AGRIMONIA** Tournefort, L, Syst ed 1

(1735).

Per herbs with unequally pinnate lvs,

lvs toothed stipules, and sm y fls in lg

spiked racemes; fr nodding; cx 5-cleft,

tube top-shaped, contracted at throat

and armed with hooked bristles; pet 5;

sta 5-15 inserted on ex-throat; ak 2, in-

cluded in the grooved and indurated ex-

tube. *Agrimonia*.

**A. EUPATORIA** L, Sp Pl 448. Er 1:13.

B 1:185.

**Genus ALCHEMILLA Tournefort.**

Sm herbs with palmately divided lvs,

and minute g'ish fls, in corymbs or clus-

ters; cx 4-5-parted, with as many alt

bracts, tube oboconical, contracted at

throat; pet o; sta 1-4; sty lateral; stig

capitate; ak 1-4, included in the persis-

tent ex-tube.

**ALLOCARYA** Greene, P 1:12. = *Eritri-*

*chium* Schrad, fide IK.

**Genus ALLIUM Linnaeus.**

Strong-scented st-less herb with bul-

bous rts, and a naked scape, ending in

an umbel of sm fls, from a 2-3-leaved

spathe; fls sometimes changed into bulb-

lets; perianth 6-parted, spreading, per-

sistent; sta 6, inserted on base of peri-

anth; fil subulate, inner ones more or

les dilated at base; ova 3-celled; sty fil-

iform; stig entire; cap loculicidally 3-

valved; sds anatropous or campylotrop-

ous, single or few in each cell, angled,

bk. Onion.

**ALISMA** (Dill) L, Syst ed 1 (1735).

Fls perfect in a whorled panicle; sep

3; pet 3, involute in bud, decid; sta 6-12;

ova num in a simple whorl; sty sh; ak 1-

seeded, 2-3-keeled on back; rts fibrous;

lvs mostly oval or cordate, nerved, sh'er

than scape; fls w.

**A. BREVIPES** P 4:158.

**A. CALIFORNICA** Boland Cat 29. B 2:

200 as *Damasonium Californicum*.

**A. CALIFORNICUM** Michell, in A. DC

Mon Pham 3:34.

**A. PARVIFLORA** Pursh. = *plantago*.

**A. PLANTAGO** L, Sp Pl 342. B 2:200.

Lvs lg-petioled, ovate or oblq, acute,

rounded or cordate at base, 3-9-nerved,

2-4' lg; panicle 1-2' lg, large, lax, the

whorled branches and elongated filiform pedicels bracted at base; ak obtuse, 15-20 in a whorl.

Synonymy:—A: parviflora et trivialis Pursh.

Variety **AQUATICA** Er 1:13.

**A: TRIVIALIS** Pursh. = plantago.

**A: VALIDUM** P 3:115.

**ALOITIS** Raf, Fl Tell 3:21. Gifts 1:94.

**A: DIVARICATA** Gifts 1:94. Tenn.

**A: MESOCHORA** Gifts 1:94. Ind; Mich; la.

**A: OCCIDENTALIS** Gifts 1:94 based on Amarella o (Gifts 1:53).

**A: FOLIOSA** Gifts 1:94. Ohio.

**ALOPECURUS GENTICULATUS** L. Ab, SCab 1:89, not typical. = californicus.

Genus **AMARANTUS** Tournefort.

**AMARANTHUS DEPLEXUS** L. sp pl 222, So Eu. Parish, SCab 2:81, LA Co.

**AMARELLA** Gilbert, Fl Lituan 1:36 (1781). = Gentiana fide IK. Gifts 1:53.

**A: ACUTA** Raf, Fl Tell 3:21. = G: Amarella fide IK.

**A: BREVICAILIS** Raf lc.

**A: GRACILIS** Raf lc. = G: Amarella fide IK.

**A: QUADRIFIDA** Gilib, Fl Lituan 1:36. = G: campestris fide IK.

**A: QUINQUEFIDA** Gilib lc. = G: Amarella fide IK.

**A: EUGOSA** Raf, Fl Tell 3:21.

**A: VULGARIS** Raf, lc 20. = G: campestris fide IK.

**A: AURICULATA** Gifts 1:53 (Pall, Fl Ross 2: t 92 f 1).

**A: FLEBILA** Gifts 1:53 (Cham in Bunge, Gent).

**A: HETEROSEPALA** Gifts 1:53 (E. St. Louis ac tr 2:215 t 8).

**A: WRIGHTII** Gifts 1:53 (G, Syn Fl 2:118).

**A: TENUIS** Gifts 1:53 (Griseb Gent 250).

**A: STRICTIFLORA** Gifts 1:53 (Rydb, Fl Mont 309).

**A: ANISOSEPALA** Gifts 1:53 (P 3:309).

**A: WISLIZENI** Gifts 1:53 (E. St L ac tr 2:215).

**A: AROTOPHILA** Gifts 1:53 (Griseb Gent 250).

**A: AMARALLOIDES** Gifts 1:53 (Michx Fl 1:175).

**A: OCCIDENTALIS** Gifts 1:53 (G, man, ed 1, 359).

**A: PROPINQUA** Gifts 1:53 (Rich App 734).

**A: DISTEGIA** Gifts 1:53 (P 4:182).

**A: MICROCALYX** Gifts 1:53 (Lemmon).

**A: COPELANDII** Greene.

"Gentiana Copelandi, Greene, in Baker distr of 1903, n 3849. Erect, sparingly branching, 2-8' hi, floriferous thruout, only sparsely branched, the internodes 1-2 lg and lvs sm, the lowest cuneate-obovate, obtuse, nerveless,  $\frac{1}{2}$ - $\frac{3}{4}$  lg, the upper oblg-linear and obtuse to linear and acute: fls large for the genus,  $\frac{3}{4}$  lg, many on lg naked slender pedicels of 1-2'; ex cleft far below middle into 5 unequal lance-linear erect seg, the longest 4 times the length of turbinate tube: setaceous crown of the p cor conspicuous, the longer setae nearly equalling cor."—Gifts 1:53. On Mt. Eddy, Siskiyou Co, Cal, at 6000', 6 S 1903, E: B:

Copeland. Remarkable for the large and com lg peduncled fls.

**A: CALIFORNICA** Greene.

"Erect, strict and simple but for some sh axy fig branches, 1-2° hi, rather naked-looking, the internodes in large plants  $2\frac{1}{2}$  or 3' lg, terete, tho with frequent traces of sharp angles: lvs ovate-lanceolate on the st,  $1\frac{1}{2}$  lg, sessile by a subordinate base, acutish, conspicuously 1-nerved, the basal ones smaller, spatulate—obovate, obtuse: fls both few and sm for so large a plant; seldom more than  $\frac{1}{2}$  lg; cx sh, deeply cleft into oblg lanceolate acute lobes, the sinuses acute: limb of cor of acutish seg  $\frac{1}{2}$  as lg as tube; crown of copious setae. Sierra Nevada in Plumas and Butte Cos, Cal, Mrs. Austin."—Gifts 1:54.

**A: LEMBERTII** Greene.

"Very slender, only 6' hi, com much branched from base, all the branches floriferous thruout: Cauline lvs lanceolate, obtuse or only acutish,  $\frac{3}{4}$  lg, the internodes not much lg'er, obtusely angled: cor hardly  $\frac{1}{2}$  lg, cx sh, very deeply cleft into oblg-linear acute lobes, the sinuses acute: cor-seg lg, acute; crown of delicate setae not inconspicuous. Yosemite valley, Cal, J: B: Lembergt, 1893."—Gifts 1:54.

**A: MACOUNII** Gifts 1:54. Vancouver Isl.

**A: CONFERTA** Gifts 1:55. Assiniboia.

**A: SCOPULORUM** Gifts 1:55. Colo-Mont.

**A: REVOLUTA** Gifts 1:55. NM.

**A: COBRENSIS** Gifts 1:56. NM.

Genus **AMBROSIA** Tournefort.

**AMBROSIA BIPINNATIFIDA** Greene.

Man 187. = Franseria b (Nutt) fide IK.

**A: CHAMISSONIS** Greene, Man 188. = Franseria C (Less) fide IK.

Genus **AMELANCHIER** Medicus.

**AMELANCHIER GLABRA** Greene, Fl Fr 52. = alnifolia fide IK.

**A: FALLIDA** Greene, Fl Fr 52. = Alni folia fide IK.

**A: FRINGELI** Koehne, in Wissenssch Progr Falk Realgymnas 25. = alnifolia? fide IK.

**A: UTARENSIS** Koehne, lc. = alnifolia? fide IK.

Genus **AMSINCKIA** Lehm.

**AMSINCKIA CAMPESTRIS** Greene.

"Stoutish, 1-2° hi, the sh and rather dense spikes aggregated at summit of st: pubescence strigose-hirsute rather than hispid: lvs all linear-oblancoate: sep sh hardly twice as lg as the nutlets, ovate-lanceolate, not ferruginous: cor inconspicuous, its throat nearly closed by folds: nutlets very dark brown, irregularly-transverse rugose and more or less echinate-muricate. At Byron Spring, and near Bethany. Mr. Ap."—Greene. Man 263.

**ANDROMEDA** L Syst ed 1 (1735).

Shrubs with alt lvs and fls in lateral and terminal racemes or clusters, nodding: cx deeply 5-parted, valvate in early bud: cor 5-toothed. sta 10; anthers opening by a terminal pore: cap 5-celled, 5-valved, manny-seeded: sds pendulous or spreading.



**ANDROMEDA ARBOREA** Linnaeus.See *Oxydendrum arboreum*.**A. BRACTEOSA** DC Prodr 7:607. B 1: 453 as *Arctostaphylos tomentosa*.**A. CUPRESSINA** Hook, Fl Bor Am 2:38. B 1:456 as *Cassiope Mertensiana*.**A. MERTENSIANA** Bong. Veg Ins Sitena 152 t 5. B 1:456 as *Cassiope M.***A. POLIFOLIA** P 3:31.**A. VENULOSA** DC, Prodr 7:607. B 1: 453 as *Arctostaphylos pungens*.Genus **ANISOCOMA** Torrey & Gray.**ANISOCOMA ACAULE** T. & G.

Sierra Co; Mohave! Nevada.

**ANOTITES** Gifts 1:97.

"Per herbs of low stature growing singly or in tufts, or forming extensive colonies by means of connected lg horizontal rt-stocks. Lfy sts com freely dichotomous, fls scattered or else in lfy-bracted cymes; the whole habit, infl, and sm w fls those of *Alsine* (or *Stellaria*). Pet bifid, appendages o. Cap subcrustaceous. = ex. 5-toothed. Sds sm, num.

**A. MENZIESII** Gifts 1:98 based on *Silena M* (Hook Fl 1:30 t 33).

**A. LATIFOLIA** Gifts 1:98, in woods at Yale, BC.**A. VISCOSA** Gifts 1:98, Wash.**A. ALBINOIDES** Gifts 1:99, Idaho.**A. COSTATA** Gifts 1:100.

"Low, stoutish, rather rigidly ascending, much branched and with sh internodes twice exceeded by the firm light-g ascending foliage; st with hirtellous and gland-tipped hairs intermixed, none retrorse; lvs oval to ovate-elliptic, faintly feather-veined, scabro-puberulent above, almost hirtellous beneath, minutely and closely hispid-ciliolate; infl terminal and contracted, pedicels less than 1/2' lg; cx-tube 10-ribbed; teeth ovate-deltoid, acute or acuminate; lobes of pet broad, each with a lateral tooth."

—Gifts 1:100. Extreme northern Cal, and adjacent Ore.

**A. DOBRII** Gifts 1:101 based on *Silena D* (K 3:44 f 12). Nev.**A. JONESII** Gifts 1:102. Ut, Colo, Wyo.**A. BAKERI** Gifts 1:102. Colo.**A. DISCUERENS** Gifts 1:103. Colo.**A. DIFFUSA** Gifts 1:99. Modoc Co, Cal.

"Low, diffusely branched from base, rather rigid, the plant 5 or 6' hi, 7-10 in breadth, not depressed, internodes sh'er than lvs, the latter broadly oblanceolate to elliptical, acute, spreading, bright g and glab or merely scaberulous above, beneath rough with sh retrorse hairs, these more num on midvein and margin; lower internodes rather densely retrose-pubescent, all from middle pts of plant upwards as densely glandular-hirtellous only; lfy bracts of copious infl not sm, elliptic-lanceolate, surpassed by filiform pedicels; mature ex surbinate, tube 10-angled; teeth deltoid, acute."—Gifts 1:99.

**A. NODOSA** Gifts 1:100. Wash.**A. MACILENTA** Gifts 1:100. Ore, Id.**A. HALOCHILA** Gifts 1:100. Ore.**A. ELLIPTICA** Gifts 1:103. Colo.**A. VILLOSULA** Gifts 1:104. Wyo.**A. TENEBRIMA** Gifts 1:104. Assiniboia.**A. DEBILIS** Gifts 1:104. Assiniboia.**A. TETRICAULIS** Gifts 1:105. Alberta.Genus **ANTENNARIA** Gaertn.

Per downy or woolly herbs, with alt entire lvs and corymbose rarely single lds; hds many-ld, dioec, discoid; cor of sterile fls 5-cleft, of pist fls filiform; inv-scales imbricated, scarious, colored; receptacle convex or flat; ak nearly terete; pap a single row of capillary bristles, which in stam fls are thickened at apex.

**A. FERRUGINEA** Gifts 1:145. Colo.**A. EALICQUAMEA** Gifts 1:145. NM.**ANTENNARIA NEVINIANUM** Orcutt,w (1891) 208. = *Nevinianum* G.**A. WATSONI** Vasey & Rose, U S Nat Mu pr 11:533. Cal.**APHYLLOX UNIFLORUM**

Variety **OCCIDENTALE** Greene, Man 285:—"scapes few, oft 1 only, slender, 1-5' hi, from an almost subterranean sh crown: ex-lobes subulate, longer than tube: cor 1/2-3/4' lg, deep blue-p. Wooded stony hills. Ap."

**APLECTRUM T.**

Sep and pet alike, linear-oblg, erect; lip spurless, sh-clawed, 3-lobed and 3-ridged at throat: column straightish, cylindrical; anth lid-like, slightly lateral; pollen-masses 4: rt tuberos, profliferous, very glutinous within, first bearing a large plaited and petioled lf, which is persistent thru the winter, and afterwards a 3-sheathed scape, with a raceme of y'ish fls at summit.

**A. HYEMALE** T, Compend 322; Fl NY 2:270 t 127. B 2:133. Cymbidium hie-male Willd.

Synonymy.—*Corallorhiza h* of ENL. *Limodorum trifidum* Michx. *Cymbidium h* of Willd.

**APOCYNUM.****A. ANDREWSII** Gifts 1:57. Conn.**A. CALOPHYLLUM** Gifts 1:57. Nev.**APOCYNUM CARDIOPHYLLUM** Greene

"Sm and rather slender, only 8 or 10' hi, very erect, branching from near base, st and lower face of lvs very blau, the whole plant glab; lvs sh petioled and all deflexed, mostly about 1' lg, at base subcordate or occasionally only truncate, at apex very obtuse, mucronate, dark-g and pale-veiny above; fls rather many, terminal and from axils of upper lvs, of large size but in sm clusters: sep sh, ovate, acuminate, of about 1/4 the length of the large, deeply flesh-colored cor's, these broad-cylindric, about 1-3d' lg, their at length spreading lobes very sh and obtuse; fr?"—Gifts 1:79. Hackett's Meadows, Tulare Co, Cal.

**A. DIVERGENS** Gifts 1:56. Conn.**A. MYRIANTHEUM** Gifts 1:59. Nev.**A. CIGANTHEUM** Gifts 1:58. Nev.**A. PALUSTRE** Greene.

"Related to *A. cannabinum*, stouter, 3-4' hi, somewhat dichotomous; lvs of main st 3 or 4' lg, 2-2 1/2' in breadth, oval, obtuse, only the sm'er and subelliptic rameal ones cuspidate-mucronate, all vivid g and w-venulose above, paler and sparsely pubescent beneath, with sh curved hairs; cymes many-ld and dense, especially the terminal one, which is far surpassed by all the others; branches of the cymes, the pedicels, and oft the cx pubescent; sep lanceolate, acute, of more

than half the length of the sm cor, this y'ish w, oft tinged with flesh-color."—Gifts 1:58. Frequent in the salt marshes of Suisun bay, Cal.

**APOCYNUM PUMILUM** Greene.

"Com pubescent, stoutish, seldom 1° hi, with spreading branches from the base: lowest lvs subreniform to round-ovate, the others cordate-ovate and oval, com  $\frac{3}{4}$ ', seldom more than 1' lg; fl solitary in upper axils, and in sh cymose clusters at the ends of the branches: cor subcylindric, 3-4' lg; oblg-lanceolate seg little spreading. Com in the Mt Diablo range and northward. Referred as a var. of *A. androsaemifolium* hitherto, but wholly distinct in size and form of cor, as well as in other particulars."—Greene, Man 240.

**A. TOMENTELLUM** Gifts 1:58. Nev.

**A. VESTITUM** Greene.

"Allied to *A. cannabinum*, but dwarfish, rather widely branching, and densely soft-pubescent thruout: lvs all ovate-lanceolate, 1-2' lg; cymes ample and compound: cor cylindric, about twice the length of the lanceolate-subulate ex-lobes, its seg a third the length of the tube, little spreading. Hills west of Napa valley, in dry soil. Jl."—Greene, Man 240.

**AQUILEGIA PAUCIFLORA** Greene.

"Scar-fid and an ally of *A. truncata*, but subscaulescent, little exceeding 1° hi, only the subliguous and fibrous-coated caudex lfy, the nearly naked and very erect pedunculiform st. bearing from 1-5 fls near the summit: lvs of half the height of fl-stalk or less, pale and minutely hirtellous beneath, very dark-g and glab above, the pedicels and spurs glandular-pubescent; fl  $1\frac{1}{2}$ ' lg from tip to tip of spurs and anth; sep oval, obtuse, spreading or reflexed, not equalling spurs; blade of pet distinct but sh; fl puberulent."—Gifts 1:76. Hackett's Meadows, Tulare Co, Cal.

**ARAEIS VIRGINICA** Trelease. Ab, SCAB 1:89, Inglewood, LA Co. Synonymy: *A. Ludovicianum* C A Meyer. *Arbutus Menziesii* Pursh.

A beautiful tree, sometimes 100 ft high, with w fls and orange-colored fr.

**ARGOPYRON PARISHII**

Variety *LAEVE* scrib & Sm. Ab, SCAB 1:89, Ballona creek near Mesmer, LA Co. **ARCTOSTAPHYLUS ARGUTA** Zucc.

Variety *DIVERSIFOLIA* Parry.

**ARCTOSTAPHYLUS OPPOSITIFOLIA** P

**ARCTOSTAPHYLUS PARRYANA** Lmn.

**ARCTOSTAPHYLUS PRINGLEI** Parry.

"Young branches, including the petioles and margins of the leaves, copiously ciliate-pubescent, with mixed glandular hairs leaves short, petiolate, glaucous, minutely net-veined, with conspicuous mid-nerves, ovate to broadly subcordate, abruptly short mucronate; inflorescence closely panicle from a thickened base, intermixed with budscales, indicating a late flowering period. racemose branches slender, thickly covered, as well as the bracts, pedicels and calyx, with ciliate and glandular hairs, bracts lanceolate membranous, petaloid, deciduous, bracteoles linear nearly  $\frac{1}{2}$  as long, pedicels slender, divaricate, 4-5 times as long as the bracts,

calyx ciliate-glandular, corolla smooth, broadly urceolate; ovary and fr. glandular, hispid, nutlets irregularly coalescent, 5-7-celled."—Parry, Bull. Cal. Acad. Sci. 11. 494 (Nov. 2, 1887).

**ARTEMISIA**

Aromatic herbs or shrubs: lvs alt, pinnately divided; hds sm, in panicked spk or racemes, few or many-fld, discoid; central fls perfect, 5-toothed (sometimes abortive), marginal ones pist, 3-toothed: inv-scales imbricated, mostly with scarious margins: receptacle convex, naked or villous: ak obovoid: pap o.

**ASTER**

**A. ORTHOPHYLLUS** Gifts 1:146. Colo.

**A. WOOTONII** Gifts 1:146 based on *A. hesperius* var: *Wootonii* Greene, T cl b 25:119. Colo, NM.

**A. LONGCHOPHYLLUS** Gifts 1:146. Colo.

**A. GRISEUS** Gifts 1:147. Colo.

**ASTER SCNOMENSIS** Greene.

"Slender, decumbent at base, 1-1 $\frac{1}{2}$ ' hi, glabrous and glaucescent, only the margins scabrous-ciliate: lvs mainly radical, narly lanceolate, tapering to a lg petiole, this with a dilated and strongly ciliate basal part; hds rather few in a terminal corymbose panicle; inv  $\frac{1}{4}$ ' hi, broad-campanulate to broad-obconic, the well imbricated bracts narly oblanceolate, acute; rays p'ish, rather nar,  $\frac{1}{2}$ ' lg. In open plains of the Sonoma valley, in low subsaline ground. S. O."—Greene, Man 180.

**ASTER LENTUS** Greene.

"Erect, slender, 4-6' hi, slightly succulent, glab except a slight pubescence under the hds, and a delicately serrulate-scabrous margin to the lvs; lowest lvs 3-5' lg, lanceolate-linear, slightly falcate, those of the fl's branches straight and half-clasping at the sessile base; panicle loose and ample, oft 3° lg, the branches loosely racemose: hds 4-5' hi; inv oblg; bracts linear, acute, appressed, g-herbaceous and somewhat succulent almost thruout; rays many,  $\frac{3}{4}$ ' lg, light p. Plentiful along tidal streams in western part of the Suisun marsh; the largest and most beautiful of the Californian sp. O-N."—Greene, Man 180.

**ASTER GREATAI** Parish.

"Sts erect or assurgent, 4-17 dm hi, glab, or above sparsely hirtellous; lvs thin, ovate, oblg-lanceolate, or lanceolate, 6-15 cm lg, the scabrid margins few-toothed, and the base clasping, the uppermost com reduced to linear or linear-lanceolate bracts; hds (5 mm hi by 10 mm wide) in an ample panicle; inv-scales loosely imbricated in a few series, lanceolate, g, minutely ciliate; rays 30-40, light p, nar, acute, 5-10 mm lg; ak hirsute. Acton, Dr. Hasse, Canyons of the San Gabriel mts, near Pasadena; McClatchie, S 1892: L. A. Greata, S 1900 (type); Mr. and Mrs. Grout, S 1900. A handsome sp of the Vulgaris section, and near *A. Fremonti* G. The recognition of it is due to Mr. Greata's notes and excellent specimens, and it fittingly may connect his name with the flora of which he is so earnest a student."—Parish, SCAB 1:15 f 2 (31 Ja 1902).

**ASTRAGALUS BRAUNTONII** Parish, S



Cab 2:26 t 1 fd.  
**ASTRAGALUS PARISHII** G. Ab, SCAB  
 1:89. Chetsworth Park, LA Co.  
**AUDIBERTIA MEARSII** Britton, NY  
 ac tr 8:71 et T cl b 16:202. Ar.  
**AUDIBERTIELLA** Brig in Herb Boiss  
 b 2:73 (Audibertia Bth). 1894.  
**A. CAPITATA** Brig, lc.  
**A. CLEVELANDII** Brig, lc.  
**A. DORRII** Brig, lc.  
**A. GRANDIFLORA** Brig, lc.  
**A. HUMILIS** Brig, lc.  
**A. INCANA** Brig, lc.  
**A. NIVEA** Brig, lc.  
**A. PALMERI** Brig, lc.  
**A. POLYSTACHYA** Brig, lc.  
**A. STACHYOIDES** Brig, lc.  
**A. VASEYI** Brig, lc.

All based on sp of Audibertia of the same names.

**BAERIA CLEVELANDI** A. Gray.

Genus **BATIS** P. Browne.

**BATIS MARITIMA** Linn.

Abrams, Fl LA 135, San Pedro and Redondo.

SD! WL.

**BATEACHIUM.**

**B. BAKERI** Glfts 1:95. Near Stanford University, Cal.

"Ann in Cal ponds and pools that go dry in summer: st 1° lg or more, nearly naked below, lower nodes remote, marked by a solitary simple lance-linear lf or phyllode; proper foliage rather sparse and sm, the submerged lvs with sh nar-linear widely divergent on almost divaricate seg not collapsing when withdrawn from water, the uppermost (perhaps also submersed) with truly filiform or capillary seg, these also rather firm, hardly collapsing; stipules of the uppermost broad, appressed-pubescent: fls very sm: carpels 12-20 in a depressed-globose hd: sty linear but sh.

**B. PEDUNCULARE** Glfts 1:95.

"Stout and low ann, spreading beneath the water in slow streams of the Cal coast range: all internodes sh and whole plant copiously lfy with a capillary-dissected foliage quite exceeding internodes and not collapsing; ped very stout, of half the diam of the stout branches that bear them, about 1° lg, falcate-curved in fr; pet of sm fls remarkably lg oblg; carpels sm, glab, sharply keeled and rugulose, tipped with a slender-subulate sty and forming a depressed-globose hd of about 12-20 in each."

—Glfts 1:95. Lake Co, Cal.  
**BERMUDIANA** Tourn. = *Sisyrinchium* L.

**B. BELLA** Greene, Man 308.

**B. CALIFORNICA** Greene, Man 308.

**BIDENS CORMATA** G lfts 1:149. NM.

**BILDERDYKIA** Dumortier, Florula Belgica 18 (1827). = *Polygonum* fide IK. Tinaria Small. Glfts 1:23.

**B. CILINODIS** Glfts 1:23, based on P: c (Michx Fl 1:241).

**B. CONVULVULUS** Dum, lc. = P: C fide IK. Glfts 1:23.

**B. CRISTATA** Glfts 1:23, based on P: c (E & G. Pl Lindh 51).

**B. DUMETORUM** Dum, lc. = P: d fide IK. Glfts 1:23.

**B. PTEROCARPA** Glfts 1:23 based on P: p (Wall, Cat n 1690).

**B. SCANDENS** Glfts 1:23, based on P: s (L, sp pl 522).

**BISTORTA** Caesalpino de Plantis 167 (1583). Glfts 1:17.

**B. AFFINIS** Glfts 1:21 based on *Polygonum* a (Don, Prodr 70). Asia.

**B. AMERICANA** Raf, Fl Tell 3:12 based on *Polygonum bistortoides* Pursh. Glfts 1:18.

**B. AMPLEXICAULIS** Glfts 1:21 based on *Polygonum* a (Don, Prodr 70). Asia.

**B. BERNADINA** Glfts 1:18 based on *Polygonum bernardinum* P: 5:199.

**B. GULIFERA** Glfts 1:21 based on *Polygonum* b (Royle, L sc tr 18:94). Asia.

**B. GLAOPHYLLA** Glfts 1:19. Colo.

**B. CEPHALOPHORA** Glfts 1:18 based on *Polygonum cephalophorum* P: 5:198.

**B. CONFUSA** Glfts 1:21 based on *Polygonum* c (Meisn, in Wall Pl as Rar 3:53). Asia.

**B. GLASTIFOLIA** Glfts 1:18 based on *Polygonum glastifolium* P: 5:199.

**B. JEJUNA** Glfts 1:18 based on *Polygonum jejunum* P: 5:198.

**B. LEPTOPHYLLA** Glfts 1:20.

**B. LILACINA** Glfts 1:18. Colo.

**B. LINEARIFOLIA** Glfts 1:18 based on *Polygonum linearifolium* P: 5:197.

**B. LITTORALIS** Glfts 1:19. Ark.

**B. MACCOUNII** Glfts 1:18 based on *Polygonum* M (Small, in Macoun Pl Pribil 570).

**B. MAJOR** Tragus (1552). Glfts 1:18.

Synonymy.—*B. vulgaris* Hill, Brit Herbal 488 (1756) et *B. officinalis* Raf, Fl Tell 3:12 (1836) fide Glfts 1:18.

**B. OPHIOGLOSSA** Glfts 1:19. Alaska.

**B. OXYPHYLLA** Glfts 1:21 based on *Polygonum* o (Wall, Cat n 1715). Asia.

**B. PERFUSILLA** Glfts 1:21 based on *Polygonum* p (Hook f, Ic Pl t 1490). Asia.

**B. PLUMOSA** Glfts 1:18 based on P: p (Small).

**BISTORTA SCABERULA** Greene.

"Tall and with large foliage, but rt unknown: basal lvs upright, 1° lg, oblg blade little lg'er than the stoutish petiole, mostly obtuse at base, over 1' wide, thinnish, neither revolute nor crisped, of a vivid g above, the veins there inconspicuous, beneath paler and glaucescent, midvein broad, neither flattened nor striate, veins and veinlets, especially the latter, muriculate-scaberulous: st stoutish, 2° hl, glab, striate, the sheaths 1½° lg, bearing each a sessile acute lf about as lg: spikes barely 1° lg and ovoid, scarcely ¾° lg."—Glfts 1:77. Hackett's Meadows, Tulare Co, Cal.

**B. SCOPULINA** Glfts 1:20. Colo.

**B. SPHAEROSTACHYA** Glfts 1:21 based on *Polygonum* s (Meisn, Monogr 53). Asia.

**B. SPECIOSA** Glfts 1:21 based on *Polygonum* s (Meisn, Monogr 66). Asia.

**B. STENOPHYLLA** Glfts 1:21 based on *Polygonum* s (Meisn, Monogr 52). Asia.

**B. VACCINIIFOLIA** Glfts 1:21 based on *Polygonum* v (Wall, Cat n 1695). Asia.

**B. VIVIPARA** S. F. Gray (1821). Glfts 1:18.

**B. VULCANICA** Glfts 1:18 based on

than half the length of the sm cor, this yish w. oft tinged with flesh-color."—Gifts 1:58. Frequent in the salt marshes of Suisun bay, Cal.

**APOCYNUM PUMILUM** Greene.

"Com pubescent, stoutish, seldom 1° hi, with spreading branches from the base; lowest lvs subreniform to round-ovate, the others cordate-ovate and oval, com  $\frac{3}{4}$ ", seldom more than 1' lg; fl solitary in upper axils, and in sh cymose clusters at the ends of the branches; cor subcylindric, 3-4" lg; obliq-lanceolate seg little spreading. Com in the Mt Diablo range and northward. Referred as a var. of *A. androsaemifolium* hitherto, but wholly distinct in size and form of cor, as well as in other particulars."—Greene, Man 240.

**A: TOMENTELLUM** Gifts 1:58. Nev.

**A: VESTITUM** Greene.

"Allied to *A. cannabinum*, but dwarfish, rather widely branching, and densely soft-pubescent throat: lvs all ovate-lanceolate, 1-2' lg; cymes ample and compound; cor cylindric, about twice the length of the lanceolate-subulate exlobes, its seg a third the length of the tube, little spreading. Hills west of Napa valley, in dry soil. Jl."—Greene, Man 240.

**AQUILEGIA PAUCIFLORA** Greene.

"Scar-fld and an ally of *A. truncata*, but subcaulescent, little exceeding 1° hi, only the subligneous and fibrous-coated caudex lfy, the nearly naked and very erect pedunculiform st bearing from 1-5 fis near the summit: lvs of half the height of fl-stalk or less, pale and minutely hirtellous beneath, very dark-g and glab above, the pedicels and spurs glandular-pubescent: fl  $1\frac{1}{2}$ ' lg from tip to tip of spurs and anth; sep oval, obtuse, spreading or reflexed, not equalling spurs; blade of pet distinct but sh; fl puberulent."—Gifts 1:76. Hackett's Meadows, Tulare Co, Cal.

**AEABIS VIRGINICA** Trelease. Ab.

SCAB 1:89, Inglewood, LA Co.

Synonymy: *A. Ludovicianum* C A Meyer.

*Arbutus Menziesii* Pursh.

A beautiful tree, sometimes 100 ft high, with w fis and orange-colored fr.

**ARGOPHYRON PARISHII**

Variety **LAEVE** scrib & Sm. Ab, SCAB

1:89. Ballona creek near Mesmer, LA Co.

**ARCTOSTAPHYLUS ARGUTA** Zucc.

Variety **DIVERSIFOLIA** Parry.

**ARCTOSTAPHYLUS OPPOSITIFOLIA** P

**ARCTOSTAPHYLUS PARRYANA** Lmn.

**ARCTOSTAPHYLUS PRINGLEI** Parry.

"Young branches, including the petioles and margins of the leaves, copiously ciliate-pubescent, with mixed glandular hairs leaves short, petiolate, glaucous, minutely net-veined, with conspicuous mid-nerve, ovate to broadly subcordate, abruptly short mucronate; inflorescence closely paniculate from a thickened base, intermixed with bud-scales, indicating a late flowering period, racemose branches slender, thickly covered as well as the bracts, pedicels and calyx, with ciliate and glandular hairs, bracts lanceolate membranous, petaloid, deciduous, bracteoles linear nearly  $\frac{1}{2}$  as long, pedicels slender, divaricate, 4-5 times as long as the bracts,

calyx ciliate-glandular, corolla smooth, broadly urceolate; ovary and fr. glandular, hispid, nutlets irregularly coalescent, 5-7-celled."—Parry, Bull. Cal. Acad. Sci. II. 494 (Nov. 2, 1887).

**ARTEMISIA**

Aromatic herbs or shrubs: lvs alt, pinnately divided; hds sm, in panicle spk or racemes, few or many-fld, discoid; central fis perfect, 5-toothed (sometimes abortive), marginal ones pist, 3-toothed; inv-scales imbricated, mostly with scarious margins; receptacle convex, naked or villous; ak obovoid; pap o.

**ASTER**

**A: ORTHOPHYLLUS** Gifts 1:146. Colo.

**A: WOOTONII** Gifts 1:146 based on *A. hesperius* var. *Wootonii* Greene, T cl b 25:119. Colo. NM.

**A: LONCHOPHYLLUS** Gifts 1:146. Colo.

**A: GEISEUS** Gifts 1:147. Colo.

**ASTER S. CALIFORNIENSIS** Greene.

"Slender, decumbent at base, 1-1½° hi, glabrous and glaucescent, only the fl-margins scabrous-ciliate: lvs mainly radical, narly lanceolate, tapering to a lg petiole, this with a dilated and strongly ciliate basal part; hds rather few in a terminal corymbose panicle; inv  $\frac{1}{4}$ ! li, broad-campanulate to broad-obovate, the well imbricated bracts narly oblanceolate, acute; rays pish, rather nar,  $\frac{1}{2}$ ' lg. In open plains of the Sonoma valley, in low subsaline ground. S. O."—Greene, Man 180.

**ASTER LENTUS** Greene.

"Erect, slender, 4-6° hi, slightly succulent, glab except a slight pubescence under the hds, and a delicately serrulate-scabrous margin to the lvs: lowest lvs 3-5' lg, lanceolate-linear, slightly falcate, those of the fl'g branches straight and half-clasping at the sessile base; panicle loose and ample, oft 3' lg, the branches loosely racemose; hds 4-5° hi; inv obliq; bracts linear, acute, appressed, g-herbaceous and somewhat succulent almost throat: rays many,  $\frac{3}{4}$ ' lg, light p. Plentiful along tidal streams in western part of the Suisun marsh; the largest and most beautiful of the Californian sp. O-N."—Greene, Man 180.

**ASTER GREATAI** Parish.

"Sts erect or assurgent, 4 17 dm hi, glab, or above sparsely hirtellous; lvs thin, ovate, obliq-lanceolate, or lanceolate, 6-15 cm lg, the scabrid margins few-toothed, and the base clasping, the uppermost com reduced to linear or linear-lanceolate bracts; hds (5 mm hi by 10 mm wide) in an ample panicle; inv-scales loosely imbricated in a few series, lanceolate, g, minutely ciliate; rays 30-40, light p, nar, acute, 5-10 mm lg; ak hirsute. Acton, Dr. Hasse, Canyons of the San Gabriel mts, near Pasadena; McClatchie, S 1892; L. A. Greata, S 1900 (type); Mr. and Mrs. Grout, S 1900. A handsome sp of the Vulgaris section, and near *A. Fremonti* G. The recognition of it is due to Mr. Greata's notes and excellent specimens, and it fittingly may connect his name with the flora of which he is so earnest a student."—Parish, SCAB 1:15 f 2 (31 Ja 1902).

**ASTRAGALUS BEAURTONII** Parish, S





*Polygonum vulcanicum* P 5:198.

**BLANNOSPERMA CALIFORNICUM** T. & G.

Upper Sacramento to SD.

**ELEPHARIAPPUS** Hook.

**B. NEMOROSUS** Greene.

"Rather slender, sparingly branched above, 1-2° hi, hispidulous: foliage and hds much as in *gaillardoides*, but rays pale y below the middle, w above it: pap sh, the bristles oft scarcely surpassing their copious brownish villous hairs. A beautiful sp of shaded slopes on Tamalpais, Mt Diablo and the Berkeley hills. My-Je."—Greene, Man 200.

**BOISDUVALIA** Spach. = *Oenothera* fide IK.

**B. BIPARTITA** Greene, Er 3:119 (1895). Cal.

**B. STRICTA** Greene, Fl Fr 225 (1891). CNH 4:106. Trelase, Mo bot gard r 5:117. = *Oe. Torreyi* Watside IK.

**Genus BOUTELOUA Lagasca.**

Lag in Var Cienc 2(4):134 (1805).

**B. AXILLIDOIDES** Griseb, Fl Brit WI 537, in obs, Mex. B 2:291.

**B. OLIGOSPERMA** Torr, ex G Man ed 2, 553, et Pac Ry R 4:155. B 2:291.

Torr, Pac Ry R 4:366 t 10. B 2:291.

**BOUTELOUA POLYSTACHYA** Torr.

*Chondrosium polystachyum* Bth Bot Sulph 56.

CD (Or 1468; 2064, near Ft Yuma). Texas

**B. PUMILA** Buckl, in Phil ac. pr 1862: 93. B 2:291 as *B. polystachya*.

**BOUTELOUA RACEMOSA** Lag.

Baja mts (Or 671). N. Y.

**BRACHYACTIS.**

**B. HYBRIDA** Gifts 1:147. Colo.

**BRANDEGEA PARVIFLORA** Wat ex

Rese, CNH 5:120. Parish, SCAB 2:81.

Type locality: West canyon, Palm Springs, CD, not "near Sber" fide Parish.

**BROMUS CARINATUS**

Variety **CALIFORNICUS** Shear. Ab, SCA

b 1:87, fruiting along irrigating ditches, LA Co.

**BROMUS PORTERI** Nash, T cl b 22:512 (1895).

**BURRIELLA MICROGLOSSA** H. & A.

CD; SF.

**CALAIS PLURISETA** Greene.

**CALANDRINIA BREWERI** Wat 11:124.

Parish, SCAB 8:7. Sber mts.

**CALLICARPA AMERICANA** Linnaea.

**CALLISTERIS** Gifts 1:159.

**C. AGGREGATA** Gifts 1:159 based on

*Cantua* a (Pursh, Fl 1:147). Rocky mts.

**C. COLLINA** Gifts 1:159. Colo.

**C. LEUCENTHA** Gifts, 1:159. Colo.

**C. ATTENUATA** Gifts 1:160. Colo.

**C. FORMOSISSIMA** Gifts 1:160. NM.

**C. FLAVIDA** Gifts 1:160. Colo.

**C. TEXANA** Gifts 1:160. Tex.

**C. ARIZONICA** Gifts 1:160. Ar.

**C. BRIDGESII** Gifts 1:160 based on

*Gilea aggregata* Bridgesii G. Cal.

**C. FULCHELLA** Gifts 1:160 based on

*Gilia pulchella* Dougl. Ore; Wash; Id.

**Genus CALLITRICHE Linnaea.**

The only genus in *Callitrichaceae*.

**CALOCHORTUS COLLINUS** Lemmon,

Er 3:49. Cal.

**C. MADRENSIS** Wat 23:283. Mex.

**CALOCHORTUS STRIATUS** Parish,

SCAB 1:101 t 8, 103, 104, 1:122 fd.

**Genus CALYCOSERIS A. Gray.**

**CALYCOSERIS PARRYI** A. Gray.

CD! Nevada; Utah.

**CARDAMINE OLIGOSPERMA** Nutt, T

& G, Fl 1:85.

Parish, SCAB 8:7. Monica mts.

**CASTANOPSIS CHRYSOHYLLA** Par-

ish, Z 4:346, non A DC. Ab, SCAB 1:89

as *sempervirens*.

**CASTANOPSIS SEMPERVIRENS** Dud-

ley, N A Fauna No 16 (1899), based on

*Castanea* S, K 1:71. Ab, SCAB 1:83, San

Antonio mts, LA Co, above 8000°.

**CASTILLEJA CALIFORNICA** Ab, SCA

b 1:68 fd.

Type locality: Big Tejuja Wash, LA

Co.

**CASTILLEJA GULBERTSONII** Greene.

"Slender subalpine per. sts not tufted,

each from its own very slender horizon-

tal rtstock, erect, 4-6' hi, both st and

sm nar'ly lanceolate acuminate entire

lvs minutely and sparingly hirtellous:

spike sh but fls rather large; bracts

trifid, the lowest g and leaf-like, the

others r-p; ex villous, unequally cleft,

teeth sh'er than tube; galea of cor

prominent, but sh'er than tube."—Gifts

1:78. Crabtree Meadow, Tulare Co, Cal,

11000°, near Mt Whitney.

**CASTILLEJA MARTINI** Ab, SCA b

1:69 fd.

Type locality: Wilson's Peak, LA Co.

**CASTILLEJA TRISECTA** Greene.

"Sts tufted on a tap-rt, erect, simple,

1° hi, loosely lfy, the whole herbage

sparsely pubescent and somewhat

clammy, light-g; lvs about 1½ lg, of a

broadly linear or quadrate undivided

portion, terminated by 2 nar'ly linear

unequal seg, the middle one largest:

spike lax, its trifid bracts scar: ex deep-

ly cleft on the upper side, the 4 sh

subequal lobes scar; cor with only the

lg straight ascending galea exerted."

—Gifts 1:78. Hackett's Meadows, Tu-

lare Co, Cal. 8600°.

**CEANOTHUS.**

**C. PUBESULUS** Greene.

"Nearest *C. Nevadensis*, the lvs as

large, more oval and obtuse, finely and

oft even silkily pubescent on both faces,

most so on veins beneath, these far less

prominent than in *C. Nevadensis* K."—

Gifts 1:66. Sber mts.

**C. MYRIANTHUS** Gifts 1:67. Ar.

**C. MOGOLLONICUS** Gifts 1:67. NM.

**C. FEDUNCULARIS** Gifts 1:67. Ore.

**C. ANDERSONI** Parry, Dav ac pr 5:172.

Greene, Fl Fr 81. S Cruz mts, Cal. Gifts

1:66 as *integerrimus* H & A (not of Am

authors).

**C. INTEGERRIMUS** H & A, bot Beech

329 (1838-40). Gifts 1:66 excludes Am

authors and cites *C. Andersoni* as a

synonym, referring *C. l* of Am authors

to *C. nevadensis* K, and *C. macrothyrs-*

*us*.

"Lvs thin, nar'ly oblg or oblg-elliptic,

very obtuse, delicately pinnate-veined,

glab."—Gifts 1:66.

**CEANOTHUS JEPSONI** Greene.

"Low bush, rigidly erect and intri-

cately branching, 2-4° hi, the branches

and branchlets sh and very stout, di-



variccate, puberulent when young: lvs  $\frac{3}{4}$  lg, hard-coriaceous, oblg, obtuse, or even truncate at both ends, the whole margin coarsely and saliently spinose-toothed: fl in sh-peduncled simple clusters at the ends of all the branchlets, large, dark blue, varying to w: fr large, prominently 3-horned. Open hills in Marin Co. near San Geronimo, and northward. Confused with *C. divergens* by Parry."—Greene, Man 78 (1894).

**C. MACROTHYRSUS** Greene.

"*C. thyrsiflorus*, var: *macrothyrus*, T. Wilkes exp 263; *C. integriramus* of recent writers and collectors, not Hook & Arn. Growing parts silvery-silky, the mature foliage thin, pubescent on both faces: lvs ovate to oval and oblg-oval, acute or obtusish, com subcordate, notably veiny, not emphatically triple-veined, the largest  $\frac{3}{4}$  lg, com entire but those on vigorous shoots lightly serrate, the scattered pubescence marking both faces, but veins beneath villous: thyrsus 6-8' lg, sh-ped, ped with but few and scarcely reduced lvs."—Gifts 1:68. Umpqua valley, Ore. Chico, Cal.

**C. NEVADENSIS** K 2:152.

"Lvs firm, oval, obtuse or acutish, obtuse at base but not subcordate. 1-1 $\frac{1}{2}$ ' lg, veins beneath w and prominent, the lowest lateral pair lg and nearly parallel with midvein, both faces appearing glab; a very fine pubescence on petioles and along veins beneath."—Gifts 1:66. "Chiefly of the Sierra Nevada, Cal, and at middle elevations."\*\*\*

Cur 1:133 et B 1:102 as *integriramus*. **CEROCARPUS** Bth, Voy Sulph 28 t 16 (1844).

**C. INVOLUTUS** P 1:290, San Bartolome bay, Baja.

**CEROCARPUS LEDIFOLIUS** Nutt. Ab, SCAB 1:89, Mt San Antonio, LA Co, 9000'.

**CHAETALIA**.

**C. ALSOEPHILA** Gifts 1:158. NM.

**C. CONFINIS** Gifts 1:158. Ar.

**CHLIRANTHUS SUPFRUTESCENS** Ab, SCAB 2:41 fd.

**CHLORIS ELEGANS** HBK, Nov Gen et sp 1:166. Parish, SCAB 8:7, Riverside.

**CHRYSOPSIS**.

**C. ASPERELLA** Gifts 1:150. Colo.

**C. COMPACTA** Gifts 1:51. Colo.

**CHRYSOETHAMNUS**.

**C. ASPEE** Greene.

"Resembling *C. vulcanicus*, the stout-er, the wooliness of sts more loose and w; lvs as nar but firmer, rather strongly glandular-scarious under a lens, this indument extending to the outer bracts of inv: hds subsessile, forming a more strictly thyrsoid infl, most 10 or 12-fld; bracts oblg-linear, slender-pointed, none with woolly margin: cor and ak as in *C. vulcanicus*."—Gifts 1:80. Inyo Co, Cal. Cov as *Bigelovia Bolandri*.

**C. VULCANICUS** Greene.

"Shrub allied to *C. Parryi* of Colo, more slender, lvs very narly linear and very acute, indistinctly 3-nerved thru-out, glab, or when young obscurely glandular and viscid; hds forming a nar thyrsiform panicle, hd a little more than  $\frac{1}{2}$ ' hl, nar, mostl; 5-fld, its bracts about 10, thin, lanceolate-subulate, slen-

der pointed, outermost more herbaceous, and woolly on margin at base: cor rather deeply cleft, teeth always erect: pap copious, ak silky-villous."—Gifts 1:80. On Volcano creek, above Volcano Falls, at 8000', Tulare Co, Cal.

Genus **CICUTA** Linnaeus.

**CICUTA BOLANDERI** S. Wats.

Wat 11:139. B 1:261. Da 7. C & R Rev Umb 130. P 2:6. A 1:276d.

Greene, Pitt 2:6. Suisun Bay, Cal.

"Doubtless this is the largest of the *Cicutas*, seldom less than 6' hl, oft nearly 10; the st not rarely 2' thick below."

**C. BULBIFERA** L, sp pl 255. P 2:9, Eastern and middle states of Am. to west of the Great Lakes.

**C. CALIFORNICA** G 7:344. P 1:271, 272, cites *Helosciadium*? *Californicum* H & A as a synonym. B 1:261. P 2:10.

**CICUTA MACULATA** Linn.

L, sp pl 256. A 1:267. B 1:260. P 1:271, 2:9, Eastern and middle states of Am. to west of Great Lakes.

SEer (Parish 975). Through the U. S.

**CICUTA OCCIDENTALIS** Greene.

L, syst ed (1735). A 1:267d. P 1:271, 2:1-11.

Abrams, Fl LA 2:65. Frequent in marshes toward the coast.

**CICCAEA** Tourn ex L, syst ed 1 (1735).

**C. ALPINA** var. *intermedia* Wat. Bot King 113 = *Pacifica* fide B 1:234.

**C. PACIFICA** Aschers & Magnus in bot zeit. 29:392 S. Ber foothills (Parish 1158). B 1:234.

**CITHAREXYLUM** Mill Gard Dict ed 6 1:5 (1752).

**C. FLABELLIFORME** Wat. Br 2:197, Comonadu, Baja.

**CINNA** L, sp pl 5 (1753).

**C. ARUNDINACEA** L, sp pl 5. B 2:276.

**C. LATIFOLIA** Griseb, Ledeb Fl Ross 4:435. B 2:276 as *arundinacea* var. *pendula*.

**C. MACROURA** Kunth Rev Gram 1:67. B 2:276 = *Epicampes* m fide IK.

**C. PENDULA** Trin in Mem Ac Petersb sr 6, 6(2):280. B 2:276 as *arundinacea* var. *pendula*.

**C. PURSHII** Kunth, Rev Gram 1:67. B 2:279 as *Calamagrostis Canadensis*.

**CINTRACIA**.

**C. KRUGIANA** M 1:20.

**CIRSIIUM** (Tourn) Adans Fam 2:116 (1763) = *Cnicus* fide IK.

**C. ACAULE** Weber ex Wigg, Prim Fl Hols 59. B 1:418 as *Cnicus occidentalis*.

**C. BREVIFOLIUM** Nutt. Am. Phil sc tr, ns, 7:421. B 1:418 as *Cnicus undulatus*.

**C. CALIFORNICUM** G Pac Ry R 4:112. B 1:420 as *Cnicus* C. A 1:198 as *Carduus* C.

**C. COULTERI** Harv & Gray, pl Fendl 110 = *Cnicus occidentalis* fide.

**C. DOUGLASII** D C 6:643 = *Cnicus undulatus* fide B 1:418.

**C. EDULE** Nutt, Am Phil sc tr, ns 7:420 = *Cnicus edulis* fide B 1:420.

**C. OCHROCENTRUM** G Pl Fendl 110 = *Cnicus undulatus* var. *ochrocentrum* fide B 1:419.

**C. REMOTIFOLIUM** DC 5:655 = *Cnicus* fide IK. B 1:420 as *Cnicus carlinoides* var. *Americanus* G.

**C. SCARIOSUM** Nutt, lc, 420=Cnicus s, fide B 1:421.

**C. STENOLEPIDUM** Nutt, lc, 419=Cnicus remotifolius fide B 1:420.

**C. UNDULATUM** Spreng syst 3:374=Cnicus u, fide B 1:418.

**GENUS CLADIUM** P. Br. Per herbs with stout rustocks, stout tall leafy sts and elongated channeled lvs: spkts sm com clustered in terminal corymbs, panicles or cymes: Scales mostly about 5, closely imbricated, brown, the lower empty, the terminal one fertile and 1-2 below it Stam: Perianth o: Sta 2-3: Sty 2-3-cleft, somewhat dilated at the base, continuous with the ova: ak ovate or oblong-ovate, smooth, acute with the obscure persistent base of the sty.

P Br. Hist Jamaica 114 (1756).

**CLADIUM MARISCUS** R Br Prod 236. B 2:224.

Variety **CALIFORNICUM** S. Watson. B 2:224. Da 18.

Sts in rather dense tussocks, stout, 18-24 dm hi; lvs =ing the st; panicle diffuse, drooping; spikelets in clusters of 2-3, narrowly oblong, 4-6 mm lg; lower scales ovate, acutish or acute, upper lanceolate, acute or acuminate, light brown; ak brown, ovate, attenuate above.

Watson, Bot Cal 2:224. "Swamp near San Gabriel (Brewer) and in southern Nevada (Wheeler)."

Abrams, Fl LA 73, questions the Gabriel locality.

**C. EFFUSUM** Wat. Cat. Pl Wheeler 18. B 2:224 as mariscus var. Californicum.

**CLADOTHAMNUS** Bong. Veg Sitcha 37 t 1 (1833).

**C. PYROLIFLORUS** Bong, lc P 3:75.

**GENUS CLADOTHRIX** Nuttall.

D C 13 (2):359 (1849).

**C. CRYPTANTHA** Wat 26 :125. Parish Z 5:113, CD (Parry n. 274, 1881—not from "Colton").

**C. LANUGINOSA** Nutt lc. Ark. Tex. CD; B 2:43.

**C. OBLONGIFOLIA** Wat 17:376. S Ber Co (Parish).

**C. SUPFRUITOSA** B 2:43.

**CLARKIA** Pursh Fl 1:t11 (1814)

Erect ann with brittle sts and alt lvs: fls showy in terminal racemes (nodding in the bud); ex-tube above the ova obconical or much prolonged and almost filiform, its lobes reflexed in fl or remaining united and turned to one side: pet 4, p or rose-color, with claws, the limb entire or lobed: sta typically 8, those opp the pet oft sterile and rudimentary, or 0: ova 4-celled; sty elongated, stig with 4 broad lobes: cap linear, or alternate above, straight or somewhat curved, coriaceous, somewhat 4-angled, 4-valved; sds num, angled or margined.

**C. BREWERI** P 1:141 based on Eucharidium Brewer! G.

**C. CONCINNA** P 1:140 based on Eucharidium concinnum. & M. Par 242 t.

**C. EISENIANA** k 7:94. B 2:448 et Cur 1:137 as Elegans.

**CLARKIA ELEGANS** Dougl. Dougl, bot reg t 1575. Greene, Cal, ac

b 2:398 Cruz. Br 1:210 Rose. Cov 4:103. Ab 266. B 1:232. 2:448. Da 6. Par 234.

Glab or somewhat puberulent, glau, 3-15 dm hi, simple or somewhat branched, rather stout and rigid; lvs broadly ovate to linear, repand-dentate; pet entire, the rhomboidal limb about equaling the linear claw; fil all perfect, with a densely hairy scale on each side at base; cap 1-2 cm lg, stout, sessile, 4-angled, somewhat curved, oft hairy.

**C. GAUROIDES** Dougl, ex Sweet Brit Fl Gard sr 2, t 379 = rhomboidea fide B 1:232.

**C. PULCHELLA** Pursh Fl 1:t11. B 1:231. CLARKIA RHOMBOIDES Dougl.

Dougl, Hook Fl 1:214. Jepson, Er 1:12. B 1:232. Da 6; Z 2:16. Ab 266. Ha 96. Baja mts! Wash.

**C. SAKAANA** P 1:140.

**C. XANTIANA** G. Boston sc nat hist pr 7:145. B 1:232. SBER (Parish 952), mts.

**Genus CLAYTONIA** Linnaeus.

Gronov ex L Gen ed 1, 339 (1737).

**C. ALSINOIDES** Sims bot mag t 1309 = Sibirica fide B 1:76.

**C. AMBIGUA** Wat 17:365. A 1:158.

**C. AQUATICA** Nutt in T & G Fl 1:201 = Chamissonis fide B 1:76.

**C. ARCTICA** Adam in Mem sc nat Mosc 5:94 (1817). B 1:77.

**C. ASSARIFOLIA** Bong Veg Sitcha 136. B 1:76 as Sibirica.

**C. BULBIFERA** G 12:54. B 2:436.

**C. CAROLINIANA** Mich. Fl 1:160.

**C. CALIFORNICA** Herb Petrop ex Loud Herb Brit suppl 2:621.

CLAYTONIA CHAMISSONIS Esch.

Cham in Linnaea 6:562. B 1:76. B 2:161.

**C. CUBENSIS** Bong in Mus Par ann 7:82 t 26. B 1:75 as perfoliata.

**C. DICHOTOMA** Nutt, T & G Fl 1:202. B 1:76. 2:436.

**C. DIFFUSA** Nutt, lc. B 1:76. 2:436.

CLAYTONIA EXIGUA T. & G. T & G Fl 1:200. B 1:76. 2:435. Z 2:161.

**C. FILICAULIS** Dougl. Hook Fl 1:224 t 72. B 1:76 as parvifolia.

**C. FLAGELLARIS** Bong, Veg Sitcha 136. B 1:76 as Chamissonis.

**C. GYPSOPHILOIDES** F & M, Ind Sem Hart Petrop 2:33. B 1:75 as perfoliata.

**C. LANCEOLATA** Pursh Fl 1:175 t 3. B 1:77 as chiefly Caroliniana var sessiliflora T.

**C. LINEARIS** Dougl. Hook Fl 1:224 t 71. B 1:76.

**C. MEGAPHYZA** Parry, ex Wat, Bib Index 1:118. B 1:77, Rocky mts.

**C. NEVADENSIS** Wat. B 1:77. 2:436.

CLAYTONIA PARVIFLORA Dougl. Dougl. Hook Fl 1:225 t 73. B 1:75 as perfoliata var parviflora.

**C. PARVIFLORA** Moc ex DC 3:361. B 7:76. Z 2:161.

CLAYTONIA PERFOLIATA Don.

Don. bot mag t 1336. Greene, Cal ac b 2:392 Cruz. Br 1:208. Rosa, Cruz. B 1:75.

Da 3. Z 2:120. 161. A 1:164 as Montia p.

**C. SAEMENTOSA** C A Meyer in Nou mem sc nat Mosc 7:137 t 3. B 1:77.

CLAYTONIA SPATHULATA Dougl. Hook Fl 1:226 t 74. B 1:75 as perfoliata.

Da 3. A 1:164 as Montia Spathulata.

**C. SIBERICA** L, sp pl 1:204. Asia. B 1:76.



- C. STOLONIFERA C A Meyer lc 139. B 1:76 as Chamissoensis.
- C. TENUIFOLIA T & G Fl 1:201. B 1:76 as perfoliata var. exiua.
- C. TRIHYLLA Wat 10:345. B 1:77. 2: 436. Z 2:161.
- C. UMBELLATA Wat bot King 43 t 6. B 1:77.
- C. UNALASCHENSIS Risch. Hort Gorenk ed 2. 62. B 1:76 as Sibirica.
- CLEISTOYUCCA.
- C. AREORESCENS based on Yucca arborescens. Par 48.
- CLEMATIS Dill. ex L. Gen ed 1, 163 (1737). A 1:147d.
- C. BAKERI P 4:147.
- C. DACTYOTA P 5:133.
- C. DOUGLASII Hook Fl 1:1 t 1. Ckll W 5:5. P 4:147.
- Variety ROSEA Ckll W 5:5.
- C. DRUMMONDII T & G Fl 1:9. B 1:3.
- C. ERSUTISSIMA P 4:147.
- C. LASIANtha Nutt. ex T & G Fl 1:9. Da 1. Par 93. A 1:147d. B 1:3. Ab 154.
- C. LIGUSTICIFOLIA Nutt. T & G Fl 1:9. Greene, Cal ac b 2:388 Cruz. Br 1:206 Rosa. Cov 4:55. Par 93. B 1:3. Da 1. Ab 154. A 1:147d.
- Variety CALIFORNICA Wat. A 1:147d.
- C. PAUCIFLORA Nutt. T & G Fl 1:657. B 1:3. A 1:147d. P 1:200 Cedros.
- C. SCOTTII P 4:147.
- C. VERTICILLARIS DC Syst 1:66. B 1:3. Z 2:226.
- CLEOME L. Syst ed 1 (1735). A 1:161d.
- C. AUREA Nutt. T & G Fl 1:122. =lutea fide B 1:51. Br. Colo 233.
- C. AUREA Hook. Parry. Wyo 3.
- C. INTEGRIFOLIA Nutt. T & G Fl 1: 122. A 1:161.
- C. INORNATA P 4:16, 212 as Peritoma inornatum.
- C. ISOMERIS P 1:200, based on Isomeris arborea.
- C. LUTEA Hook Fl 1:70 t 25. B 1:51. Z 2:236. Ab 81. A 1:125d. P 4:210 as Peritoma luteum.
- C. PINNATA Pursh. Fl 2:739. A 1:116 as Stanleya pinnata.
- C. PLATYCARPA T. US Exp Exp 2: 235 t 2. B 1:51. 2:433. P 4:211 as Celome p.
- C. SOMBRAE G Pl Wright 16. Br. Colo. 227. 233. B 1:51.
- C. SPARSIFOLIA Wat bot King 32 t 5. B 1:51. P 4:212 as Carsonia s.
- C. SERRULATA Pursh Fl 2:441. P 4:210 as Peritoma Serrulatum.
- C. TENUIFOLIA Le Conte T & G Fl 1:123. P 4:212 as Aldenella t.
- CLEOMELLA DC 1:237 (1824). A 1: 161d.
- C. BREVIPES Wat. 17:365. A 1:162.
- C. LONGIFES T. Hook Kew J 2:255. B 1:52.
- C. COULTERI Harv ex G Pl Wright 1:12, 129. =Wislizenia refracta fide lk.
- C. OBTUSIFOLIA T. Frem r 311. B 1:52. 2:433. Da 2. A 1:125d, 162.
- C. COCARPA G 11:72. A 1:162. B 1:52.
- C. PAEYFLORA G 6:520. B 1:52. A 1:162.
- C. PLOCASPERMA Wat bot King 33. B 1:52.
- C. PALMERANA Z 2:236.
- Genus CLEVELANDIA Greene.
- "Cx tubular-campanulate, 4-cleft
- Tube of cor slender; limb bilabiate, upper lip sh, spreading, bifid, lower with 3 spreading lobes, neither sacchate nor plicate. Sta 4, didynamous, wholly included within the cor-tube; anth 2-celled the cells unequal. Sty filiform, stig entire. Cap oblong, loculicidally 2-valved, the valves bearing the placenta on their middle. Sm ann of the southern part of Lower California."—Greene, Cal ac b 1: 182. Genus dedicated to Daniel Cleveland.
- CLEVELANDIA BELDINGI Greene.
- Greene, Cal ac b 1:182, based on Orthocarpus beldingi Greene, Cal ac b 1:123.
- CLIDEMIA D Don, Mem Wern sc 4:306 (1823).
- C. BOLIVIENSIS Cogniaux. Z 1:94. SAM.
- CLIMACIUM AMERICANUM B 2:407.
- CLINTONIA Raf. Am mo mag 1818, 266.
- C. ANDREWSIANA T. Pac Ry R 4:150. Par 208. B 2:180.
- C. ELEGANS Lindl. bot reg t 1241. B 1:144 as Downingia e.
- C. PULCHELLA Lindl. bot reg t 1909. Sweet, Brit Fl Gard sr 2, t 412. B 1:144 as Downingia p.
- C. UNIFLOEA Kunth, En 5:159. B 2:179. Z 2:268.
- Genus CNEORIDIUM Hooker, f.
- B & H Gen 1:312 (1862).
- CNEORIDIUM DUMOSUM Hook. f.
- B 1:97. Spice bush.
- Genus CNICUS Linnaeus
- L. Syst ed 1 (1735).
- C. AMPLIFOLIUS P 1:70.
- C. ANDERSONII G 10:44. B 1:419.
- C. ANDREWSII G 10:45. B 1:420.
- C. ARIZONICUS G 10:44. B 1:419.
- C. ARVENSIENSIS Hoffm Deutschl Fl ed 1, 1 (2):130. Eu. Asia. B 1:417.
- C. BENEDICTUS L. Reiche Ic 15 t 748.
- B 2:459 as Carbenia benedicta.
- C. BIPINNATUS Eastwood, Cal ac pr. sr 3, 1:121 (1898). M 1:5 as Carduus b.
- C. BREWERI G 10:43. B 1:418.
- C. CALCAREUS Jones, Cal ac pr sr 2, 5:704 (1895). M 1:5 as Carduus c.
- CNICUS CALIFORNICUS A. Gray.
- G 10:46. B 1:420. Da 10.
- Staistaus Co to Baja ; Arizona.
- C. CLAVATUS Jones, Cal ac pr sr 2, 5:704 (1895). M 1:5 as Carduus c.
- C. CARLINOIDES Schrank, Pl Rar t 11. B 1:420. 2:459.
- C. DIFFUSUS Eastwood, Cal ac pr sr 3, 1:121 (1898). M 1:6 as Carduus d.
- CNICUS DRUMMONDII A. Gray.
- G 10:40. Parish, Z 5:120. Er 6:92. "Meadows at Warner ranch, SD Co, sts 1-2° hl". B 1:418.
- SD Co to Arctic regions.
- Variety ACAULESCENS A. Gray.
- Parish. Z 5:120. "Common in So Cal mts," but not, apparently, the typical form.
- Colo; Nevada; Baja mts!
- CNICUS EDULIS A. Gray.
- G 10:47. Z 1:58. Z 1:420.
- British Columbia; Sber (Parish).
- C. HESPERIUS Eastwood, Cal. ac pr sr 3, 1:122 (1898). M 1:6 as Carduus h.
- C. HALLII G 19:56. Parish. Er 7:97, near Redlands, Cal.
- C. LANCEOLATUS Willd Prod Fl Berl

259. Eu. B 1:417.  
 C. NIDULUS Jones, Cal ac pr sr 2, 5:705 (1895). M 1:6 as *Carduus* n.  
 CNICUS OCCIDENTALIS A. Gray.  
 G 10:45. B 1:419. Da 10. P 1:91 Mig. Br 1:213 Rosa (cites C. *ilacinus* Greene, as a synonym). Ore. Baja.  
 Oregon to Baja; Cruz; Rosa.  
 C. PARRYI G 10:47. B 1:421.  
 C. QUERCETORUM G 10:40. B 1:418.  
 C. REMOTIFOLIUS G 10:47. B 1:420.  
 C. UNDULATUS G 10:42. B 1:418.  
 C. TIOGANUS Congdon, Er 7:186 (1900). M 1:147 as *Carduus* t.  
 COBAEA Cav lc 1:11 t 16, 17 (1791).  
 C. SCANDENS Cav. lc t 16, 17. B 1:485. Mex. Cult.  
 COCHLEARIA Tourn, ex L. Syst ed 1 (1735).  
 C. AQUATICA Eaton. Man ed 5, 181 (1839). = *Nasturtium lacustre*? fide IK. P 3:95 as *Neobackia* a.  
 C. AQUATICA C. A. Meyer, in Ledeb Fl Alt 3:88.  
 C. SILIQUOSA Schlecht in DC Syst 2: 368. = *Draba hyperborea* fide IK. P 3:253 as *Nesodraba* s.  
 C. SPATHULATA Schlecht, lc, 369. = *Draba hyperborea* fide IK. P 3:253 as *Nesodraba grandis*.  
 COELOPLEURUM Ledeb, Fl Ross 2:361 (1844). = *Archangelica* fide IK.  
 C. MARITIMUM C & R, bot gaz, 1888, 141-5. W 5:19. Wash.  
 COGSWELLIA Sprengel in Roem & Schult Syst Veg 6: xviii (1820). Coulter & Rose (CNH 12:448) cites *Lomatium* Raf in J Phys 89:101 (1819), not *Lomatia* R Br (1810) as a synonym, following Jones (in Contr West bot 12: (1908) in part in transferring the sp.  
 C. ALATA CNH 12:448 based on *Lomatium alatum* CNH 7:228 (1900).  
 C. AMBIGUA Jones, Contr 12:32.  
 C. ANGUSTATA CNH 12:449 based on *Peucedanum Martindalei* var: *angustatum* C & R, bot gaz 13:143 (1888).  
 C. ANOMALA Jones, Contr 12:32.  
 C. ARGENTIS CNH 12:449 based on *Peucedanum argense* Jones  
 C. ARTEMISIARUM CNH 12:449 based on *Lomatium* a (CNH 11:423).  
 C. AUSTINAE Jones, Contr 12:35.  
 C. BICOLORE Jones, Contr 12:33.  
 C. BRECCIARUM Jones, Contr 12:32.  
 C. BREVIFOLIA Jones, Contr 12:32.  
 C. CANBYI Jones, Contr 12:33.  
 C. CARUIFOLIA Jones, Contr 12:34.  
 Variety *PATENS* Jones, Contr 12:34.  
 C. CIRCUMDATA Jones, Contr 12:33.  
 C. COGDONI Jones, Contr 12:34.  
 C. COUS Jones, Contr 12:33.  
 C. CUSICKII Jones, Contr 12:32.  
 C. DASYCARPA Jones, Contr 12:34.  
 C. DAUCIFOLIA Jones, Contr 12:34.  
 C. DECIPiens Jones, Contr 12:38.  
 C. DONNELLI Jones, Contr 12:34.  
 C. ELLIPTICA Jones, Contr 12:33.  
 C. FARINOSA Jones, Contr 12:33.  
 C. FLAVA CNH 12:449 based on *Lomatium flavum* Suks.  
 C. FOENICULACEA CNH 12:449 based on *Ferula* f of Nutt.  
 C. GEYERI Jones, Contr 12:33.  
 C. GIGANTEA Jones, Contr 12:32.  
 C. GORMANI Jones, Contr 12:33.  
 C. GRAYI CNH 12:450 based on Loma-

- tium G.  
 C. HALLII Jones, Contr 12:35.  
 C. HENDERSONII Jones, Contr 12:33.  
 C. JAREDII CNH 12:450 based on *Peucedanum* J (Eastwood, Z 5:88).  
 C. JONESII Jones, Contr 12:34.  
 C. JUNIPERINA Jones, Contr 12:34.  
 C. LAEVIGATA Jones, Contr 12:32.  
 C. LEBEZEI Jones, Contr 12:35.  
 C. LEMMONI Jones, Contr 12:33.  
 C. LEPTOCARPA Jones, Contr 12:33.  
 C. MACDOUGALLI Jones, Contr 12:34.  
 C. MACROCARPA Jones, Contr 12:33.  
 C. MARGINATA Jones, Contr 12:35.  
 C. MARTINDALEI Jones, Contr 12:34.  
 Variety *AUGUSTATA* Jones, Contr 12: 34. CNH 12:449 as sp.  
 C. MICROCARPA Jones, Contr 12:35.  
 C. MOHAVEENSIS Jones, Contr 12:34.  
 C. MONTANA Jones, Contr 12:34.  
 C. NEVADENSIS Jones, Contr 12:33.  
 Variety *CUPULATA* Jones, Contr 12:33.  
 Variety *PSUDORIENTALIS* Jones, Contr 12:37.  
 Variety *PARISHII* Jones, Contr 12:33.  
 CNH 12:450 as sp.  
 C. NUDICATULIS Jones, Contr 12:31.  
 C. OREGANA Jones, Contr 12:35.  
 C. ORIENTALIS Jones, Contr 12:33.  
 C. PARISHII CNH 12:450 based on *Lomatium* P.  
 C. PIPERI Jones, Contr 12:33.  
 C. PLATYCARPA Jones, Contr 12:32.  
 C. PLATYPHYLLA CNH 12:450 based on *Peucedanum latifolium* Nutt (not DC).  
 C. PLUMMERAE Jones, Contr 12:34.  
 C. ROBUSTIOR CNH 12:451 based on *Lomatium* r.  
 C. SANDBERGII Jones, Contr 12:35.  
 C. SERPENTINA Jones, Contr 12:42.  
 C. SIMULANS CNH 12:451. Cal.  
 C. SONNEI Jones, Contr 12:34.  
 C. SUKSDORFII Jones, Contr 12:32.  
 C. TOMENTOSA Jones, Contr 12:35.  
 C. TORREYI Jones, Contr 12:35.  
 C. TRITEA Jones, Contr 12:32.  
 Variety *ROBUSTIOR* Jones, Contr 12:32.  
 CNH 12:451 as sp.  
 C. UTRICULATA Jones, Contr 12:34.  
 C. VAGINATA Jones, Contr 12:34.  
 C. VASEYI CNH 12:451 based on *Lomatium* V.  
 C. WATSONI Jones, Contr 12:33.  
 C. VILLOSA Spreng. CNH 12:449 as *foeniculacea*.  
 COLEOSANTHUS.  
 C. AKILLARIS Gifts 1:149. NM.  
 C. MELISSOPOLIUS Gifts 1:150. NM.  
 Genus *COLDENIA* Linnaeus.  
 L. Diss Dass 9 (1747).  
 C. ANGELICA Wat. Br 2:187, Calamujuet, Baja.  
 C. BREVICALYX Wat. Parish Er 6:91, CD (probably not from SBr).  
 COLDENIA CANESCENS D. C.  
 DC 9:559. Br. 2:187, San Gregorio, Calamujuet, Baja. Ar. Tex. CD. Mex.  
 C. HISPIDISSIMA G. 5:340. B 1:520.  
 C. NUTTALLII Hooker Kew J 3:296. B 1:520. Ar. Ut. Wyo. Wash.  
 COLDENIA PALMERI A. Gray.  
 G 8:292. CD. Mohave. Ar. Baja!  
 COLEANTHUS Seid, Roem & Schult Syst 2:11, 276 (1817).  
 C. SUBTILIS Seid, lc. B 2:267.



**COLEOGYNE** T, Smith Cart 6:8 t 4 (1854).

**C. RAMOSISSIMA** T, lc. B 1:174.

**COLEOSANTHUS** Cass Philam b 67 (1816).

Herbaceous per or partly shrubby plants with opp or alt lvs and discoid hds of w'tish or pink fls in panicles or cymes; inv-bracts well-imbricated in several sr, striate, receptacle flat or convex; ak 10 striate or ribbed; pap a single row of num rough or serrate bristles.

**C. ABBREVIATUS** P 4:125.

**C. AMBIGENS** P 4:237.

**C. CALIFORNICUS** Kunth. A 1:189d. Ab 391.

**C. CEDROSENSIS** Greene Er 1:54, based on Brickellia C.

**C. CUSPIDATUS** Greene, Er 1:54, based on Brickellia Cuspidata G.

**C. DENSUS** P 4:126.

**C. DESERTORUM** Cov. A 1:189 fdr.

**C. FENDLERI** P 4:237.

**C. FLORIBUNDUS** P 4:237.

**C. GRACILIPES** P 4:237.

**C. GRANDIFLORUS** P 4:237-8.

**C. HUMILIS** P 4:124.

**C. KNAPPIANA** Greene, Er 1:54 based on Brickellia K.

**C. MODETUS** P 4:236.

**C. NEPETAEFOLIUS** P 4:237.

**C. NEVINII** OK. Based on Brickellia Nevinii G.

Herbage W-woolly; lvs repandodentate; hds 30-40-fld.

**C. OBLONGIFOLIUS** P 4:125.

**C. POLYANTHEMUS** P 4:126.

**C. POPULIFOLIUS** P 4:238.

**C. RHOMBOIDEUS** Greene, Er 1:54 based on Brickellia rhomboidea.

**C. SCABER** P 3:100.

**C. UMBELLATUS** P 4:238.

**C. VERBENACEUS** P 4:125.

**COLEOSPORIUM ELEPHANTOPODIS** M 1:17.

#### Genus **COLLINSIA** Nuttall.

Phil ac J 1:190 t 9 (1817). A 1:229d.

**C. BARBATA** Bosse in Verh Berl Gartenb Ver N Reihe 1:399. B 1:553 as tinctoria.

**COLLINSIA BARTSIAEFOLIA** Benth.

DC 10:318. B 1:554. Throuth Cal. Baja.

**COLLINSIA BICOLOR** Benth.

Hort sc tr, ns, 1:480. Br 1:215, Rosa.

Par 298 t. A 1:15, 229d. B 1:553. Da 13.

Ab 362.

Auricula-p fls, upper divisions of cor w, tinged with rose and auricula-p spots at the center.

Lindl, Bot Reg t 1734 (1834).

Type locality: "California."

Biol, Erythra 1:17.

Hall, U 115.

Coville, CNH 4:171.

Abrams, Fl LA 362.

**COLLINSIA BREVIFOLIA** W. Suks.

**COLLINSIA CALLOSA** Parish.

A 1:15 fdr. Ab 363.

**COLLINSIA CHILDSII** Parry.

G, Syn Fl 2(1):257. Da 12. Sber mts. B 2:472. A 1:230.

Stem strict, mostly simple; cor light blue.

**COLLINSIA CONCOLOR** Greene.

A 1:15 fdr.

**C. COEYMBOSA** Herder. Ind Sem Hort Petrop 32. B 1:554.

**C. DIVARICATA** K 3:36. Cur 1:144 as sparsiflora.

**COLLINSIA FRANCISCANA** Biol.

**C. GRANDIFLORA** Dougl, bot reg t 1166, 1107. B 1:554.

**C. GREENEI** G 10:75. B 1:554.

**C. FLOREBUNDA** P 1:55 based on Tonella f.

**C. FRANCISCANA** Biol. A 1:16 fdr.

**C. HETEROPHYLLA** R. Grah, bot mag t 3655. B 1:553 as bicolor.

**C. HIESUTA** K 2:110, f 34. B 1:554 et

Cur 1:144 as bartsiaefolia.

**C. LINEARIS** G 15:50. B 2:472.

**C. MINIMA** Nutt, Phil ac J 7:47. B 1:555 as parviflora.

**C. MULTICOLOR** Lindl & Paxt, Fl Gard 2:89 t 55.

**COLLINSIA PARRYI** A. Gray.

Gray, Syn Fl 2 pt 1, 257 (1878).

G, Syn Fl 2(1):257. B 2:472. A 1:229d.

Coville, CNH 4:171. Panamint mts.

Abrams, Fl LA 363.

Type locality: "Sber Co, Cal."

**COLLINSIA PARVIFLORA** Dougl.

Lindl, bot reg 13 t 1082 (1827). Cov 171. B 1:555. A 1:230d.

Often diffuse; cor little exserted 4-6 mm long.

Variety **SPARSIFLORA** Bth in DC. B 1:555 as s.

**C. SEPTEMNERVA** K. 2:224, f 69. B 1:553 et Cur 1:144 as tinctoria.

**C. PAUCIFLORA** Hook Fl 2:94 error for parviflora fide B 1:555.

**C. RATTANI** G 15:50. B 2:472.

**C. PURPUREA** Raf atl J 149.

**C. SOLITARIA** K 2:10. B 1:555 et Cur 1:144 as sparsiflora.

**C. SPARSIFLORA** F & M. Ind Sem Hort Petrop 2:33. Biol. Er 1:17. B 1:555.

**COLLINSIA STRICTA** Greene.

"St slender 1° hi, mostly slim, puberulent, the infl glandular-villous and very viscid; lvs oblg-lanceolate, crenate, on very sh villous-ciliate petioles; fls verticillastrate and crowded sh-pedicelled; cor ½ lg. flesh-color, the lower lip elongated, upper parted into 2 nar very acute sh seg which are reflexed and laid one against the other. Bushy hills near Sheep Ranch, Calaveras Co. Cal, Je 1889." P 2:23.

**C. TENELLA** Bth, DC 10:593. P 1:55 cites Tonella collin soides Nutt as a synonym. B 1:555. M 1:5 as Tonella tenella.

**COLLINSIA TINCTORIA** Hartweg.

Hartweg, MS, in Bentham, Pl Hartw 328 (1849).

Coville, CNH 4:171. Tejon mts.

Abrams, Fl LA 363. Gabriel mts.

Type locality; "in montibus Sacramento."

Par 298. B 1:555. Z 2:165. A 1:230d.

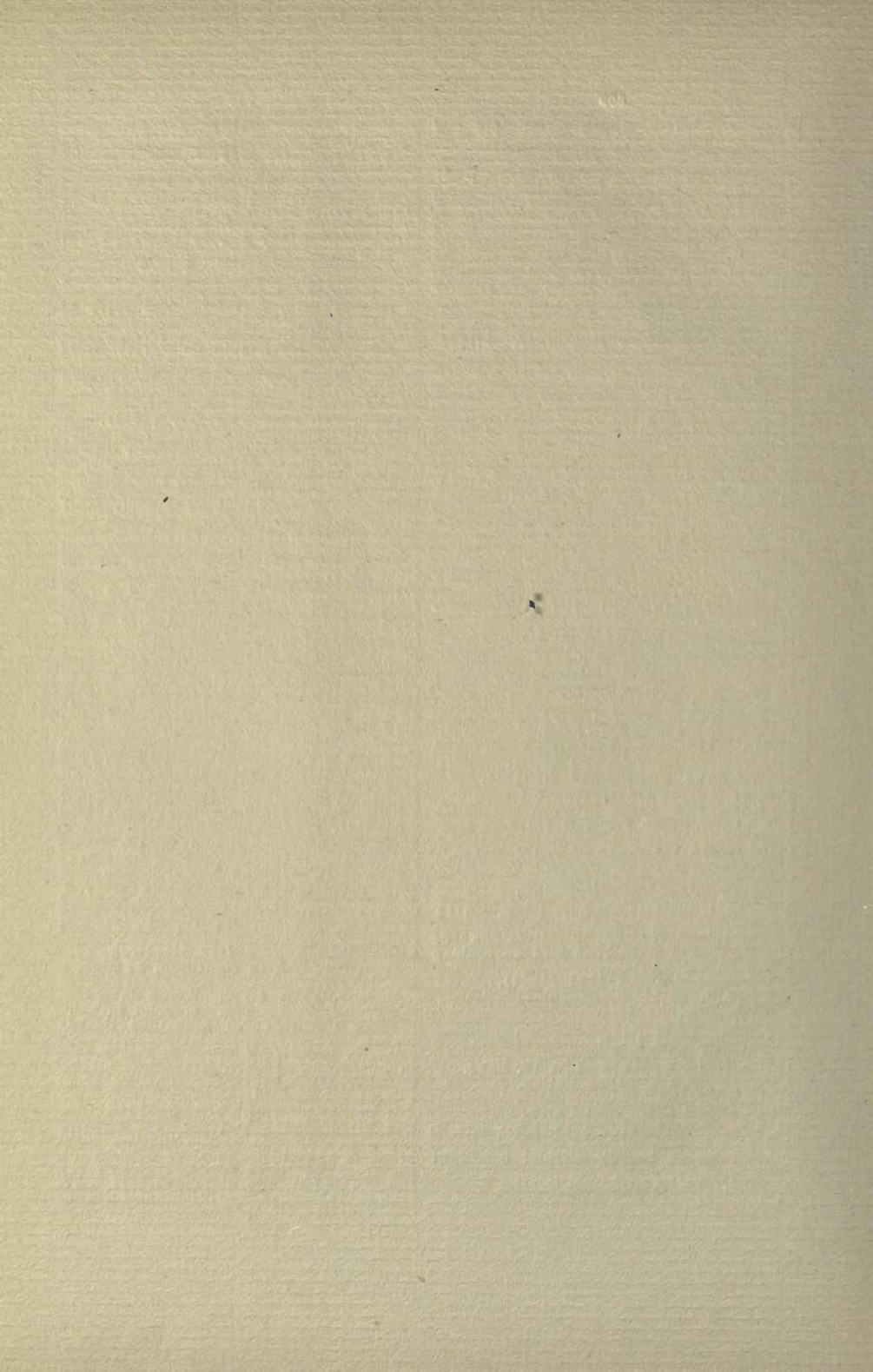
**C. TORREYI** G 7:378. B 1:555. Z 2:165.

**C. VIOLACEA** Nutt. Am Phil sc tr 5: 179. B 1:554.

#### Genus **COLLOMIA** Nuttall.

Gen 1:126 (1818). P 1:126.

Herbs with opp or alt lvs; ex turbinate. in age obpyramidal or cup-shaped, its teeth or lobes equal, entire, erect, the sinuses in age distended into a recurved lobe; cor narly funneiform or





- luteolus var. *fulcratus* fide B 1:534).  
**C. CAMPESTRIS** P 3:328. Ill. Ind. Wis.  
**C. COLLINUS** P 3:326 (villosus Greene. Man 265 in part).  
**C. DELTOIDEUS** P 3:331. Kern Co. Cal.  
**C. FRUITICETOUM** P 3:333. Cal.  
**C. GRACILENTUS** P 3:329. Mariposa Co. Cal.  
**C. LIMNOCHEILUS** P 3:329. SF.  
**CONVOLVULUS LONGIPES** S. Watson. Am nat 7:302. A 1:95d. Cov 166. B 1:534.  
**CONVOLVULUS LUTEOLUS** A. Gray. G 11:90. A 1:95d. B 1:534. P 3:333. Par 44.  
**C. MACCOUNII** P 3:331. Assiniboia.  
**C. MACROSTEGII** S. Greene. Cal ac b 1:208. 2:408 Cruz. P 1:92 Mig. Br. Z 1:85 as occidentalis. Br 1:215 Rosa.  
**C. MALACOPHYLLUS** P 3:326. Sierra Nevada, Cal.  
**C. NUTTALLII** P 3:330. A 1:13 fdr. So. Cal.  
**C. NYCTAGINEUS** P 3:327. Ore.  
**C. POLYMOERPHUS** P 3:331. No. Cal. Ore.  
**C. PURPUREATUS** P 3:332. SF.  
**C. REPENS** L, sp pl 158. Ab 309. A 1:344d.  
**C. SEPIUM** L, sp pl 153. = *Calystegia* s fide Ik. P 3:328. B 1:533. Br, Colo 231. Sber (Parish).  
 Variety **REPENS** Da 12.  
**C. SPITAMEUS** L, sp pl 158. P 2:228, 333.  
**C. STANS** H B K Nov Gen et Sp 3:96. = *Ipomoea stans* fide Ik. P 3:328, 333.  
**C. TOMENTELLUS** P 3:327. A 1:14 fdr. Mts So Cal.  
**COINOGYNE** Less in *Linnaea* 6:520. = *Jaumea* fide IK.  
**C. CARNOSA** Less, lc 521. B 1:372 as *J. carnosa*.  
**CONVOLVULUS OCCIDENTALIS** Gray. G 11:89. Ab 309. B 1:533. Da 12. Br, Z 1:85. cites *macrostegius* as synonym; Guad, Mig. Cruz, Cat, Rosa, San Clemente Island and mainland. Par 46. Greene, Cal ac b 2:408. Sber. SF. Baja.  
 Glau or minutely pubescent; sts freely twining over shrubs; lvs slender-petioled, angular-cordate with a deep narrow sinus to sagittate, or the upper hastate; basal lobes oft 1-2-toothed; peds elongated, surpassing the lf, 1-3-nd; bracts at base of ex ovate or obscurely cordate, membranaceous, equalling it or somewhat longer, mostly obtuse; cor campanulate-funnelform, w or pinkish, 3-5 cm lg; stig linear.  
 Variety **TENUISSIMUS** Asa. Gray.  
 Narrowly hastate or sagittate leaves 1-2 in. long; the middle and mostly the basal lobes narrowly lanceolate; bracts ovate-oblong or ovate lanceolate, acute or acuminate. San Diego; Santa Barbara. Ab 309. A 1:13 as *Nuttallii*.  
**C. PENTAPETALOIDES** L. syst ed 12, 229. Fu. Asia. Baja. Br. 1:204 Cruz. A 1:346d.  
**C. SOLDANELLA** L, sp pl 159. A 1:349d. Par 216. B 1:553. Da 12. Ab 309. = *Calystegia* s fide Ik.  
**C. VILLOSUS** G 11:90. B 1:554. P 3:326 as *malacophyllus*.  
 Genus **CONYZA** Linnaeus. Gen ed 1, 251 (1837).  
 Herbaceous or shrubby, of various habit; hds sm, many-fld; bracts of campanulate inv nar, inappendiculate, in 1-3 sr; female fls much more num than the hermaphrodite; their filiform or slender tubular cor sh'er than disk and sty, truncate or 2-4-toothed at apex; ak sm, compressed; pap a single sr of soft capillary bristles, sometimes an added outer sr of sh bristles or squamellae.  
**C. COULTERI** G 7:355. B 1:332. Ab 404. McClatchie, Er 2:125. Cat. Baja, Ar. Tex. Colo. Greene, Cal ac b 2:401. Cruz. Da 8. B 1:332.  
 Ann 1-2° hi, com branched, bearing num sm hds in a thyrsoid lfy panicle, viscidly pubescent or partly hirsute with many joined hairs; inv 1-2" hi hirsute with soft spreading hairs, shorter than the soft pap; fls w, cor-tube of num pist ½ as lg as sty, hermaphrodite fls 5-7.  
 Cruz; L A (Parish 1098); Conoindu, Baja (Br).  
**C. SALICINA** K 3:36. Cur 1:139 as *Baccharis viminea* DC.  
**C. SUBCURRENS** G, Pl Fendl 78; Pl Wright 1:102. B 1:332 as *Coulteri*. (DC 5:379 = *Erigeron* Subd.)  
**COOPERIA PEDUNCULATA** Herb.  
**COPTIS** Salisb, in Linn sc tr 8:305 (1807).  
**C. ASPLENIFOLIA** Salisb, in Linn sc tr 8:305 (1807). B 2:427.  
**C. OCCIDENTALIS** T & G Fl 1:28. B 2:427.  
**CORALLICORNIZA** Hall, En stirp Helo 1:278 (1742).  
**C. BIGELOVII** Wat 12:275. B 2:132. Par 278 t.  
**C. INNATA** R Br in Ait Hort Kew ed 2, 5:209. B 2:132.  
**C. MACKAYI** G, Man (1856) 453. B 2:132 as *striata* Lindl.  
**C. MERTENSIANA** Bong Veg Sitcha 165. B 2:132, 483.  
**C. MULTIFLORA** Nutt. Phil ac J 3:138 t7 (1823). B 2:131. Ha 69. Par 278. Coral-root.  
**C. STRIATA** Lindl, G en et sp Orch 534. B 2:132. (T. Pac Ry R 4:153 t 25 = *Bigelovii* fide B 2:132).  
**CORDIA** L, Gen ed 1. 52 (1837).  
**C. ANGUSTIFOLIA** Bth, bot Sulph 37 (not R & S). = *Palmeri*?  
**C. GREGGII** T, bot Mex. Bound 135. Mex. Baja.  
**C. PALMERI** Wat. Baja.  
 Genus **CORDYLANTHUS** Nuttall.  
 Bth in DC 10:597 (1846). = *Adenostegia*.  
**C. CANESCENS** G 7:383. B 1:581.  
**C. CAPITATUS** Nutt, DC 10:597. B 1:580. LA (Da).  
**CORDYLANTHUS FILIFOLIUS** Nutt. DC 10:597. B 1:581, 622. Da 13. Z 1:3. Harkness, Z 1:3 as *Adenostegia rigida* Bth.  
**C. KINGII** Wat bot King 233, 459 t 22. B 1:581.  
**C. LAXIFLORUS** G, bot Mex bound 120. Ar.  
**CORDYLANTHUS MARITIMUS** Nutt. DC 10:598. B 1:581. Da 13. A 1:232 as *Adenostegia* m.  
**C. MOLLIS** G 7:384. B 1:582.  
**CORDYLANTHUS NEVINI** A. Gray. G 17:229. Baja mts, Cuyamaca (Or 1879). See *Adenostegia* N.  
**C. ORCUTTIANUS** G 19:95. A 1:17d.

salverform, salmon-y, r'ish, p or w: sta unequal, unequally inserted on tube of cor, mostly straight: sd 1 in each cell, the sd-coat developing spiral threads when wet: Oval to obovoid. Included in Gillia by G.

- A—Lvs lanceolate, entire or toothed.  
a—Cor large, salmon-y. C: grandiflora.  
b—Cor sm, lobes p, 1" lg; cx-lobes subulate. C: linearis.  
c—Cor sm, p, lobes 1" lg; cx-lobes nar, distinctly awned. C: tinctoria.  
d—Cor 5-6" lg, limb 3-4" broad, deep blue; cx-lobes subulate. C: mazama.

B—Lvs variously lobed and divided. C: heterophylla.

C. AGGREGATA T C Porter ex G, Syn Fl 2(1):394. B 2:465.—Gilla a.

C. GILIOIDES Bth, bot reg sub t 1622. B 1:488. A 1:177 as Gillia g.

COLLOMIA GLUTINOSA A. Gray. Bth, bot reg t 1622. B 1:488 as gillioides.

Laguna mt, SD Col! Baja mts (Or 843). LA. Cat.

COLLOMIA GRACILIS Dougl. Dougl, bot reg t 1622. B 1:488. P 3:300 as Microsteris g. As J.2 as Microsteris Californica. P 1:141 as Phlox g. A 1:176 (of recent authors as Mic. Cal.) Hook bot mag t 2924.

C. DEBILIS P 1:127 based on Gillia debilis Wat.

C. DIVERSIFOLIA P 1:128, Colusa Co., Cal.

COLLOMIA GRANDIFLORA Dougl. Dougl, bot reg t 1174. B 1:487. Ab 312. DC 9:308. P 1:127. Par 184 sub Gillia.

Ha U 103.\*SD mts; Sber Co.

COLLOMIA HETEROPHYLLA Hook. Hooker, bot mag t 2895, bot reg t 1347. P 1:128. B 1:488.

Gillia Sessel G. Doñ.

Navarretia heterophylla Benth.

British Columbia to Baja mts!

C. HUMILIS Dougl. Hook Fl 2:76. P 3:301 as probably Microsteris humilis.

C. LEPTALEA G 8:261. B 1:488. Cur 1:142 as Gillia Capillaris k.

C. LINEARIS Nutt Gen 1:126. B 1:487. Lindl, bot reg t 1166. P 1:128. Colo.

Variety SUBULATA G. P 1:129 as tinctoria

C. MICRANTHA K 3:18. Cur 1:142 as Gillia gracilis Hooker. P 3:303 as Microsteris m.

C. NUDICAULIS H & A bot Beech 368. B 1:492 as Gillia n. P 3:304 as Gymnosteris n.

C. RAWSONIANA P 1:221, Fresno Co, Cal.

C. TENELLA G 8:259. P 1:129, cites Gillia leptotes G as a synonym; in part as tinctoria. Ut. B 1:488.

C. TINCTORIA K 3:17 t 2. Cur 1:142 as Gillia t. P 1:129. Cal. Nev. B 1:488.

COLUBERINA Rich ex Brongn. in Ann Sci nat, sr 1, 10:368 t 15 f 3 (1827).

C. CLABRA Wat. Br 2:143, Baja.

COMANDEA Nutt. Gen 1:157 (1818).

C. FALLIDA DC 14:636. B 2:103.

C. UMBELLATA Nutt. Gen 1:157. B 2:103. Rof, new Fl Am 2:33 sub umbellulata (error?).

COMARSTAPHYLIS Zucc in Abh ac Muench 2:331 (1837).—Arctostaphylis fide 1k.

C. ARGUTA Zucc in Linnaea 12: Litt 86. COMARUM L syst ed 1 (1735).

C. PALUSTRE L, sp pl 502. B 1:180 as Potentilla palustris Scop.

COMELYNE Plum ex L, syst ed 1 (1735).

C. ANGUSTIFOLIA K, Pac Rural Press, 31 My 1879. Cur 1:150, as "evidently C. dianthifolia DC."

C. DIANTHIFOLIA Red Lil 7:t390. Mex. CONANTHUS Wat, Bot King 256 (1871).

See Nama.

C. ARETIODES Wat, bot King 256. Ore. Ar. eastern Cal. B 1:515.

C. DEMISSUS Heller. Ab 327. A 1:172 as Nama demissum.

C. STENOCAERPE Heller. Ab 327.

CONDALIA Cav, in Ancient nat 1:39 t 4 (1799).

C. MEXICANA Schlecht, in Linnaea 15: 471.

So Ar. (Pringle). Mex. Baja (Br).

CONDALIA SPATHULATA A. Gray. Pl Wright 1:32. CD. Baja. Ar. Tex. Mex.

CONIOTHELE DC 5:531 (1836).—Blennosperma fide 1k.

C. CALIFORNICA DC 5:531. B 1:395. = B. C.

#### Genus CONIUM Linnaeus.

L, syst ed 1 (1735). A 1:267d.

CONIUM MACULATUM Linn.

L, sp pl 243. A 1:267. B 1:258. Z 2:353. Ab 283. Greene. Cal ac b 2:339 Cruz.

McClatchie, Erythea 2:123. Pasadena. Cruz (Greene). Naturalized.

CONOCLINIUM DC 5:135 (1836).—Eupatorium fide 1k.

C. FLACCIDUM P 4:274.

C. NEPETAEBOLIUM P 4:274.

C. VENULOSUM P 4:273.

CONVALLARIA L, syst ed (1735).

C. BIFOLIA L, sp pl 316.—Smilacina bifolia fide 1k.

Variety KAMTSCHATICA C & S. Linnaea 6:587. B 2:162 as Maianthemum bifolium var. (?) dilatatum Wood.

CONVOLVULUS L sys ed (1735). A 1: 344d.

C. AMERICANUS P 3:328.

CONVOLVULUS ARIDUS Greene. P 3:330. A 1:14 fdr.

C. ARVENSIS L, sp pl 153. A 1:346d. Par 46. Greene. Cal ac b 2:408, Cruz; "no doubt of recent introduction." Da 12. B 2:470. Z 2:27. Ab 309.

CONVOLVULUS BINGHAMIAE Greene.

Greene, Cal ac b 2:417 (28 My 1887):—"Per from creeping rtstocks, the sts 3-6" lg, twining or trailing: lvs glab, oval or oblg, rather abruptly acute, the base with a pair of obtuse parallel or very little divergent hastate lobes: peduncles 1-fld: bracts oval to narly oblg, 4" lg, flat and closely subtending and oppressed to the ex, which they are too sm to half conceal: ex 6-8" lg: cor pure w: sta rather sh, the tips of the anth attaining to the base only of the linear stlg."

Type locality: "In marshy places about Burton's Mound, in city of Sber; collected in 1886, by Mrs. R. F. Bingham, and the writer."

CONVOLVULUS CALIFORNICA Choisy. DC 9:405. Lyon, bot gaz 3:1314 Cat.

Parish Z 5:116—occidentalis? A 1:14d. B 1:533. Da 12 (T. Pac Ry R 4:127—



luteolus var. fulcratus fide B 1:534).  
**C. CAMPORUM** P 3:328. Ill.-Ind. Wis.  
**C. COLLINUS** P 3:326 (villosus Greene. Man 265 in part).  
**C. DELTOIDEUS** P 3:331. Kern Co. Cal.  
**C. FRUTICETORUM** P 3:333. Cal.  
**C. GRACILENTUS** P 3:329. Mariposa Co. Cal.  
**C. LIMNOPHILUS** P 3:329. SF.  
**CONVOLVULUS LONGIPES** S. Watson. Am nat 7:302. A 1:95d. Cov 166. B 1:534.  
**CONVOLVULUS LUTEOLUS** A. Gray. G 11:90. A 1:95d. B 1:534. P 3:333. Par 44.  
**C. MACOUNII** P 3:331. Assinibola.  
**C. MACROSTEGIUS** Greene, Cal ac b 1:208. 2:408 Cruz. P 1:92 Mig. Br. Z 1:85 as occidentalis. Br 1:215 Rosa.  
**C. MALACOPHYLLUS** P 3:326. Sierra Nevada, Cal.  
**C. NUTTALLII** P 3:330. A 1:13 fdr. So. Cal.  
**C. NYCTAGINEUS** P 3:327. Ore.  
**C. POLYMORPHUS** P 3:331. No Cal, Ore.  
**C. PURPURATUS** P 3:332. SF.  
**C. REPENS** L, sp pl 158. Ab 309. A 1:344d.  
**C. SEPIUM** L, sp pl 153. = Calystegia s fide lk. P 3:328. B 1:533. Br, Colo 231. Sber (Parish).  
 Variety **REPENS** Da 12.  
**C. SPITHAMAEUS** L, sp pl 158. P 3:328, 333.  
**C. STANS** H B K Nov Gen et Sp 3:96. = Ipomoea stans fide lk. P 3:328, 333.  
**C. TOMENTELLUS** P 3:327. A 1:14 fdr. Mts So Cal.  
**COINOGYNE** Less in Linnaea 6:520. = Jaumea fide lk.  
**C. CARNOSA** Less, lc 521. B 1:372 as J. carnosa.  
**CONVOLVULUS OCCIDENTALIS** Gray G 11:89. Ab 309. B 1:533. Da 12. Br, Z 1:85, cites macrostegius as synonym; Guad, Mig, Cruz, Cat, Rosa, San Clemente Island and mainland. Par 46. Greene, Cal ac o 2:408, Sber. SF. Baja.  
 Glau or minutely pubescent; sts freely twining over shrubs; lvs slender-petioled, angular-cordate with a deep narrow sinus to sagittate, or the upper hastate; basal lobes oft 1-2-toothed; peds elongated, surpassing the lf, 1-3-fld; bracts at base of cx ovate or obscurely cordate, membranaceous, equaling it or somewhat longer, mostly obtuse; cor campanulate-funnelform, w or pinkish, 3-5 cm lg; stig linear.  
 Variety **TENUISSIMUS** Asa Gray.  
 Narrowly hastate or sagittate leaves 1-2 in. long; the middle and mostly the basal lobes narrowly lanceolate; bracts ovate-oblong or ovate lanceolate, acute or acuminate. San Diego; Santa Barbara.  
 Ab 309. A 1:13 as Nuttallii.  
**C. PENTAFETALOIDES** L, syst ed 12, 229. Eu. Asia. Baja. Br 1:204 Cruz. A 1:346d.  
**C. SOLDANELLA** L, sp pl 159. A 1:349d. Par 216. B 1:553. Da. 12. Ab 309. = Calystegia s fide lk.  
**C. VILLOSUS** G 11:90. B 1:554. P 3:326 as malacophyllus.  
 Genus **CONYZA** Linnaeus.  
 Gen ed 1, 251 (1837).  
 Herbaceous or shrubby, of various

habit; hds sm, many-fld; bracts of campanulate inv nar, inappediculate, in 1-3 sr; female fls much more num than the hermaphrodite; their filiform or slender tubular cor sh'er than disk and sty, truncate or 2-4-toothed at apex; ak sm, compressed; pap a single sr of soft capillary bristles, sometimes an added outer sr of sh bristles or squamellae.  
**C. COULTERI** G 7:355. B 1:332. Ab 404. McClatchie, Er 2:125, Cat. Baja, Ar. Tex. Colo. Greene, Cal ac b 2:401, Cruz. Da 8. B 1:332.

Ann 1-2° hl, com branched, bearing num sm hds in a thyrsoid lfy panicle, viscidly pubescent or partly hirsute with many joined hairs: inv 1-2° hl hirsute with soft spreading hairs, shorter than the soft pap: fls w, cor-tube of num pist ½ as lg as sty, hermaphrodite fls 5-7.

Cruz; L A (Parish 1098); Comondu, Baja (Br).

**C. SALICINA** K 3:36. Cur 1:139 as Baccharis viminea DC.

**C. SUBDECURRENS** G, Pl Fendl 78; Pl Wright 1:102. B 1:332 as Coulteri. (DC 5:379 = Erigeron Subd.)

**C. COPERIA PEDUNCULATA** Herb. **COPHIS** Salisb, in Linn sc tr 8:305 (1807).

**C. ASPLENIFOLIA** Salisb, in Linn sc tr 8:305 (1807). B 2:427.

**C. OCCIDENTALIS** T & G Fl 1:28. B 2:427.

**CORALLORHIZA** Hall, En stirp Helo 1:278 (1742).

**C. BIGELOVII** Wat 12:275. B 2:132. Par 278 t.

**C. INNATA** R. Br in Alt Hort Kew ed 2, 5:209. B 2:132.

**C. MACRAEI** G, Man (1856) 453. B 2:132 as striata Lindl.

**C. MERTENSIANA** Bong Veg Sitcha 165. B 2:132, 483.

**C. MULTIFLORA** Nutt. Phil ac J 3:138 17 (1823). B 2:131. Ha 69. Par 278.

Coral-root.  
**C. STELIATA** Lindl. G en et sp Orch 534. B 2:132. (T, Pac Ry R 4:153 t 25 = Bigelovii fide B 2:132).

**CORDIA** L, Gen ed 1, 52 (1837).

**C. ANGUSTIFOLIA** Bth, bot Sulph 37 (not R & S). = Palmeri?

**C. GREGGII** T, bot Mex. Bound 135. Mex. Baja.

**C. PALMERI** Wat. Baja.

Genus **CORDYLANTHUS** Nuttall.

Bth in DC 10:597 (1846). = Adenostegia.

**C. CANESCENS** G 7:383. B 1:581.

**C. CAPITATUS** Nutt, DC 10:597. B 1:580. LA (Da).

**CORDYLANTHUS FILIFOLIUS** Nutt. DC 10:597. B 1:581, 622. Da 13. Z 1:3.

Harkness, Z 1:3 as Adenostegia rigida Bth.

**C. KINGII** Wat bot King 233, 459 t 22. B 1:581.

**C. LAXIFLORUS** G, bot Mex bound 120. Ar.

**CORDYLANTHUS MARITIMUS** Nutt. DC 10:598. B 1:581. Da 13. A 1:232 as Adenostegia m.

**C. MOLLIS** G 7:384. B 1:582.

**CORDYLANTHUS NEVINI** A. Gray. G 7:229. Baja mts. Cuyamaca (Or 1879). See Adenostegia N.

**C. ORCUTTIANUS** G 19:95. A 1:17d.

C. PILOSUS G 7:382. B 1:581.  
 C. PRINGLEI G 19:94.  
 C. RAMOSUS Nutt, DC 10:597. B 1:580.  
 C. TENUISS G 7:383. B 1:581.  
 C. WRIGHTII G bot Mex. bound 120.  
 Tex. NM.  
**COREOPSIS** L, Gen. ed 1, 263 (1737).  
 C. ANGUSTATA P 4:239.  
 C. ATKINSONIANA Dougl, bot reg t  
 1376. B 1:355.  
 C. BIDENS L, sp pl 908. = *Bidens cernua*  
 fide 1k. P 4:245 as ?  
 C. CALLIOPSIDEA G, bot Mex. bound  
 90. B 1:355 as *Leptosyne Caliopeidea*.  
 Bolander, Cat Pl SF.  
 C. LANCEOLATA L, sp pl 908. P 4:245.  
 C. MARITIMA Hook. f. bot mag t 6241.  
 B 2:457 as *Leptosyne maritima*.  
 C. PERFOLIATA Walt, Fl Carol 214. =  
*Bidens chrysanthemoides* fide 1k. P  
 4:263 as a *nomen seminudum*.

#### Genus CORETHROGYNE De C.

Per herbs covered with a w wooly  
 tomentum at least when young: Infl  
 glandular: lvs alt entire or serrate, hds  
 middle-sized, solitary, corymbose or  
 panicled: Inv hemispheric to turbinate,  
 its bracts much imbricated, scarious ex-  
 cept the herbaceous tips: Receptacle  
 pitted: Ray fls sterile: Anth appendaged  
 at apex: Sty, appendages comose or  
 with a bearded tuft.

**CORETHROGYNE CALIFORNICA** DC.  
 DC 5:215. B 1:321. Da 8.

Sts erect or ascending, 1° or more hi:  
 branches rather equally 1fy thruout and  
 terminated by single pretty large hds:  
 lvs linear-lanceolate or linear, chiefly  
 entire: Inv broadly hemispherical (near  
 1/2' lg); its scales mostly nar and acute,  
 in fewer ranks loose, all glandular-  
 pubescent, rarely some chaff on the  
 receptacle among the outer fls.

Monterey to SD, near the coast.  
 C. CANA Greene, Cal ac b 1:223. P 1:29  
 as *Hazardia* c.

C. DETONSA Greene, T cl b 10:41. P  
 1:29 as *Hazardia* d.

**CORETHROGYNE FILAGINIFOLIA** Nt.  
 Am Phil sc tr 7:290. B 1:320. Ha 126.  
 Da 8, Er 2:30, Cat. Greene. Cal ac b 2:401  
 Cruz. Br. 1:211 Rosa.

Monterey; Cruz; Rosa; Quintin! in fl  
 throughout the year!

Variety **BIGIDA** G. So Cal.  
 Variety **ROBUSTA** Greene.

"Suffrutescent and low, the thick  
 somewhat depressed or ascending  
 branches only a ft hi: panicle g and  
 glandular-viscid, other parts w'ish with  
 an oppressed tomentum. Southeastern  
 part of Mig, among hi rocks; also in  
 great abundance on the top of Prince's  
 Island. It might perhaps well be reck-  
 oned a distinct species."—P 1:89.

Variety **TOMENTELLA** G. "Very w-  
 woolly at least when young, and the lvs  
 mostly sh'er and broader."—B 1:321.

Variety **VIRGATA** G. "Becoming glab-  
 rate, and the inv more rigid and glandu-  
 lar: hds com num and corym'd or pan-  
 icled."—B 1:321. So Cal. See *virgata*  
 Da 8.

C. INCANA Nutt, Am Phil sc tr 7:290.  
 B 1:320 as *Californica*.

C. OBOVATA Bth Voy Sulph 22. B 1:321  
 as *flaginifolia* var.  
 C. SPATHULATA G 7:351. B 1:321. =  
*obovata* fide 1k.

C. TOMENTELLA T & G Fl 2:99. B 1:  
 321 as *flaginifolia* var *tomentella*.  
 C. VIRGATA Bth Voy Sulph 23. B 1:321  
 as *flaginifolia* var *virgata*. A 1:193d.  
 Ab 401.

Variety **BERNARDINA** Ab 401. A 1:193  
 fdr.

**CORIANDRUM** L, syst ed 1 (1735).

**CORIANDRUM SATIVUM** Linn.

L, sp pl 256. C & R, Rev um 35, Par-  
 ish, Z 1:10. Da 7, Er 1:59, LA Co.

Da 7. Oregon to Baja. Coriander, an es-  
 cape from cultivation.

**CORISPERMUM** B Juss, ex L, syst ed 1  
 (1735).

C. **HYSSOIFOLIUM** L, sp pl 4. Eu.  
 Asia, B 2:57. Canada to Mex.

Somewhat floccose—or villous—pules-  
 cent, at least when young, 1/2-1 1/2° hi,  
 erect, rather rigid: lvs linear, 1-1 1/2' lg,  
 cuspidate; fl-bracts from linear-lance-  
 olate to ovate, membranously margined:  
 spikes sh and close, becoming more or  
 less elongated: central sta longest, lat-  
 erals partially developed or 0; fr broad-  
 ly elliptical, 1 1/2 or 2" lg, narly winged,  
 obtuse, oft mucronate with the persist-  
 ent sty.

#### Genus CORNUS Linnaeus.

Shrubs or trees or rarely herbs, with  
 simple com entire and com opp. rarely  
 verticillate lvs, and sm fls in cymes or  
 hds, the latter involucreate with large w  
 bracts; cx-limb minutely 4-toothed: pet  
 4, valvate; sta 4; ovules 1 in each cell:  
 drupe ovoid or globose, the stone 2-  
 celled, 2-seeded. Dogwood.

C. ALBA L, Mant 1:40 (H & A bot  
 Beech 42 = *Californica* fide B 1:275).

C. BAILEYI Z 1:63, 94.

C. CALIFORNICA C A Meyer, Phys-  
 Meth ac b Pet 3:373 (1845). B 1:275. A  
 1:41d.

C. CANADENSIS L, sp pl 118. Par 96.  
 B 1:274. P 3:76.

C. CIRCINATA L'Herit Comus 7 (C & S  
 in Linnaea 3:139 (1828) = *Californica* fide  
 B 1:275.)

C. GLABRATA Bth, Voy Sulph 18. B  
 1:275. 2:452.

C. GREENEI Z 1:63, 94.

C. NUTTALLII Audubon, Birds Amt 367;  
 T & G Fl 1:652. B 1:274. 2: 42. Z 2:4,  
 157, 259, 354. Ha 99. Par 96. A 1:41d.

**CORNUS OCCIDENTALE** Cov 4:117. Ab  
 293.

Shrub 2-5m hi, with smooth p'lish  
 branches: lvs ovate to oblong-elliptic,  
 acute or somewhat acuminate, su'y  
 cuneate at base, 3-10 cm lg, paler be-  
 neath and more or less pubescent with  
 loose silky hairs, especially on the  
 veins; cym spreading, round-topped, 3-5  
 cm broad, fr w, subglobose; stone 5 mm  
 broad, somewhat compressed, furrowed  
 on the edges.

C. PUBESCENS Nutt, Syl 3:54. Par 96. Z  
 1:94. Ha 99. B 1:275. Z 1:94. 2:158, 354.  
 Ab 293 as *occidentalis*.

Variety **CALIFORNICA** C & S Da ., Mc-  
 Clatchie, Er 2:123 Cat.

C. SP-RICEA L, Mont 2:199. L'Herit  
 Cornus 5 t 2. = *Amomum* fide 1k.



Variety *OCCIDENTALIS* T & G Fl 1:652 (1840). B 1:275 as pubescens.

**C. SESSILIS** Raf Alsog Am 60.  
**C. SESSILIS** T ex Durand, Phil ac J, sr 2, 3:89 (1855). B 1:274, 2:452. Coulter, bot gaz 15:33. Br. Z 1:88 Amador Co, Cal; "Fr very dark r."

**C. STOLONIFERUS** Michx. Fl 1:92. B 1:275.

**C. TORREYI** Wat 11:145. B 1:275.

**CORTINARIUS SINTENSII** M 1:22.

**CORYDALIS** Vent Choix 19 (1803) in nota; DC, Fl Fr 4:636 (1805).

**C. AUZEA** Willd En 740. B 1:24.

Variety **OCCIDENTALIS** C. Chkl W 5:6.

**C. BIDWELLIAE** Wat B 2:429.

**C. BRANDEGEI** Wat B 2:430.

**C. CASEANA** G 10:69. B 1:24. 2: 429. Br, Colo, 228, 233.

**C. CUSICKII** Wat B 2:430.

**C. MONTANA** E, G Man, ed 5, 62. = aurea fide B 1:24.

**C. SCOLERII** Hook Fl 1:36 t 14. B 1:24.

### Genus *CORYLUS* Tournefort.

L. syst ed 1 (1735).

**CORYLUS ROSTRATA** Art.

Ait Hort Kew 3:364. B 2:100. Z 2:159, 373.

Variety **CALIFORNICA** A. DC.

**COSMOPHODON RENAULDI** Z 1:63.

**COSMANTHUS** Nolte, ex DC 9:296 (1838). = *Phacelia* fide IK.

**C. GRANDIFLORUS** DC, lc B 1:513 as *Phacelia* g.

**C. VISCIDUS** DC, lc. B 1:513 as *Phacelia* v.

### Genus *COTULA* Linnaeus.

L. syst ed 1 (1735). A 1:252 d.

**COTULA AUSTRALIS** Hooker.

Hook, f Fl NZ 128. Da 10. Ab 436.

B 1:405. Z 1:58. 2:360. A 1:253 d.

Parish, Zoe 1:58. SD.

Davidson, Erythra 1:61. LA Co.

Abrams, Fl LA 436. In waste places

along streets, not common. Ja-Mr.

**COTULA CORONOPIFOLIA** Linn.

L. sp pl 892. A 1:253 d. Ab 436. B 1:405.

Da 10. Par 156. Z 1:58. 2:4, 360.

Type locality: "in Aethiopia," etc.

Coville, CNH 4:137. Near SBer.

Parish Zoe 1:58.

Davidson, Erythra 1:60. LA Co.

Abrams, Fl LA 436. Common in wet

places along streams and marshes, es-

pecially toward the coast. Flowering

nearly throughout the year.

**C. MATRICARIOIDES** Bong. Veg Sitcha

29. B 1:401 as *Matricaria discoides*.

**COTYLEDON** L. syst ed 1 (1735).

**C. ATTENUATA** Wat. A 1:92 as *Stylo-*

*phyllum* a.

**C. CAESPITOSA** Haw, syn pl succ 107.

B 1:212.

**C. CALIFORNICA** Baker, Sound Ref bot

70. B 1:212 as laxa.

**C. EDULIS** Brewer, B 1:211. A 1:92 as

*Stylophyllum* e.

**C. FARINOSA** Baker, Sound Ref bot 1:

71. B 1:211. 2:447.

**C. LANCEOLATA** B 1:211. 2:447. Da 6.

Br. Z 1:113 Cat.

P 1:88 Mig; (264 San Benito Isl; 285 as

linearis). Br 1:210 Rosa.

Greene, Cal ac b 2:397 Cruz.

**C. LAXA** B 1:212, 2:447. = *Californica*

fide IK. Greene, Cal ac b 2:397 Cruz? Ha 83.

**C. LINEARIS** Greene, P 1:285. A 1:50 as *Dudleya* l.

**C. LINGULA** Wat 14:293. B 2:447.

**C. NEVADENSIS** B 1:212.

**COTYLEDON NUDICAULE** Ab, SCAB 2:42 fd.

**C. NUDICAULE** Abrams. A 1:93 as *Dudleya* n.

**C. ORCUTII** Greene. A 1:93 as *Stylo-*

*phyllum* O.

**C. OREGONENSIS** Wat 17:373. A 1:165.

**C. PALMERI** Wat 14:292. B 2:447.

**C. PULVERULENTA** Baker, Sound Ref bot 1: t 66. B 1:211. 2:447. Da 6. A

1:50 as *Dudleya* p.

**C. VISCIDA** Wat 17:372. A 1:91 as *Stylophyllum viscidum*.

**COURTISIA** Nees in Linnaea 9:286 (1834).

**C. BIPINNATIFIDA** Reichenbach, Ic Exot t 208. B 1:488 as *Collomia hetero-*

*phylla*.

**COWANIA** D Don, Linn sc tr 14:574 t 22 (1825).

**C. BAIKALICA** T ex G, Pl Wright 2: 106. B 1:175.

**C. MEXICANA** D Don, Linn sc tr 14:575 t 22 f 1-6. E 1:175.

**C. PLICATA** D Don, Sweet Brit Fl Gard sr 2, t 400. B 1:175. (Torr, Mex bound p 314 = *mexicana* fide IK.

**C. STANSBURIANA** Torr, Stans exp Ut 386 t 3. B 1:175 as *Mexicana*.

**CRASSULA** Dill ex L. syst ed 1 (1735).

**C. AQUATICA** Schoeml. A 1:49 as *Til-*

*laeastrum aquaticum*.

**CRASSAEGUS** L. syst ed 1 (1735).

**C. ARBUTIFOLIA** Ait Hort Kew ed 2, 3:202. B 1:188 et A 1:319 as *Heteromeles*

a.

**C. DOUGLASHII** Lindl, bot reg t 1810. B 1:189. Z 2:229.

**C. RIVULARIS** Nutt, ex T & G Fl 1: 464. B 1:189. P 3:99.

**C. COCCINEA** L sp pl 476. Z 2:229, 260. Br, Colo 229, 236.

**C. SANGUINEA** J G Cp, Am nat 3:407.

Variety **DOUGLASHII** T & G Fl 1:464. Nutt, sylh 2:6 t 44. B 1:189 as *Doug-*

*lasii*.

**C. SALIGNA** P 3:99. Colo.

**C. REPIDIUM** Tauch in Fl 9: i Erg 80. = *Crepis* fide IK.

**C. CAULESCENS** Nutt, Am phil sc tr ns, 7:436. B 1:436. = *Crepis glauca* fide IK.

**C. GLAUCUM** Nutt, lc. B 1:436 as *Crepis glauca*.

Genus **CREPIS** Linnaeus.

Per or ann herbs, with alt or basal mostly toothed or pinnatifid lvs, and sm or middle-sized hds, com paniculate-

corymbose, of y fls: inv cylindric or campanulate, its principal bracts in 1 series,

equal, with a number of exterior sm'er ones, 10-20-ribbed or -nerved, not trans-

versely rugose, beakless: pap copious of very slender w bristles.

L. Gen ed 1, 240, n 621 (1737).

**C. ACUMINATA** Nutt, Am phil sc tr ns, 7:437. B 1:436.

**C. ANDERSONII** G 6:553. B 1:436.

**C. BIENNIS** L sp pl 807. Eu. Ab 451 LA. Pasadena. Da 10. Er 1:61 LA Co.

**C. COOPERI** G 9:214. B 1:436. = *virens*

fide IK.

**C. EXILIS** M 1:142.

**C. GLAUCA** T & G Fl 2:488. B 1:436.

**C. GRANDIFOLIA** P 3:107.

**C. LANCIFOLIA** P 3:108.

**C. MANA** Richards, Frankl J app ed 2, 92. B 1:436.

**C. OCCIDENTALIS** Nutt, Phil ac J 7:29. B 1:436.

Variety **GRACILIS** Eaton, bot king 203. B 1:436 as slender forms of acuminata.

Ann or bien, pubescent or hirsute, lfy at least below, branched above, 6-9 dm hl; lvs runcinate-pinnatifid, oblong or spatulate, at least the upper clasping;

hds several, subcorymbose, 2.5-4 cm hl; inv canescent or pubescent, 8-12 mm hl; its principal bracts linear-lanceolate,

downy within: ak glab, 13-striate. Variety **CEINITA** B 1:425. Wash.

Variety **COSTATA** B 1:435. Sierra Co, Cal.

Variety **NEVADENSIS** K 5:50. Cur 1: 141. B 1:435.

Variety **SUBACAULIS** K 5:50. Cur 1: 141 "a form". B 1:435 as variety Nevadensis.

**C. RUNCINATA** T & G Fl 2:487. B 1:436. P 3:27.

**C. PLATYPHYLLA** P 3:27.

**C. SUBCARNOSA** P 3:107.

**CRESSA** L, Dis Dass 12 (1747). A 1:344d. **C. APHYLLA** Heller.

**C. AUSTRALIS** R Br Prod 490. B 1:534 as cretica.

**C. CRETICA** L, sp pl 223. P 1:92 Mig. Da 12. B 1:534. A 1:345 d.

**C. TRUXILLENIS** HBK Nov Gen et sp 3:93. Peru. B 1:534 as cretica. Ab 452.

**CEINITARIA** Cass Dict 37:475 (1825). = Aster fide IK.

**C. VISCIDIFLORA** Hook Fl 2:24. B 1: 317 as Bigelovia Douglasii. = Bigelovia viscidiflora fide IK.

**CROCIDIUM** Hook Fl 1:335 t 118 (1833).

**C. MULTICAULE** Hook lc. B 1:396.

**CROSSOSOMA** Nutt, Phil ac J ns, 1:150 (1847). A 1:153d.

**C. BIGELOVII** Wat 11:122. A 1:153d. B 1:13.2: 428. Z 1:27.

**C. CALIFORNICUM** Nutt lc, 150 t 22. A 1:153d. B 1:13. Z 1:27, 109. (T, Pac Ry R 4:63 t 1 excl f 1 = Bigelovii fide B 1:13.)

**CROSSOSTIGMA** Spach in Nouv ann mus Par 4:328 (1835). = Epilobium fide IK.

**C. LINDLEYI** Spach lc 404. B 1:220 as Epilobium minutum.

#### Genus **CROTON** Linnaeus.

Stellate-pubescent, more or less glandular and strong-scented herbs or shrubs, with mostly alt, entire, toothed or lobed lvs, and mon or dioe fls in terminal or axyl clusters; stam fls uppermost; ex com 5-parted; pet com present, sm or rudimentary, alt with glands; sta 5 or more, inflexed; pist fls clustered below stam; ex 5-10-parted; pet com 0; ova 3-celled; ovules 1 in each cell; sty once, twice or many times 2-cleft; cap splitting into com 2-valved carpels; sds smooth or minutely pitted. Croton.

**CROTON CALIFORNICUS** Mull.

Org in DC, Prod 15 (2): 691. Cov 194.

B 2:69. Ab 232. Da 16 L.A. Bloch, Er 2:162, El Barbasco, note on medicinal value.

Suffrutescent, procumbent or ascending, 4-12 dm hl, dichotomously branched; branches slender, cinereous thruout with a dense appressed scurf; petioles slender, 2-3.5 cm lg; stipules obsolete; lvs com oblong, 2.5-5 cm lg, 8-18 mm wide, entire, 3-5 nerved; dioecious; stam plants more slender and short-branched; racemes simple; fls about 3 mm broad, on pedicels 4-6 mm lg; sep 5, ovate; sta 12-15; fil ciliate; pist raceme mostly 2-3-fid; sty 3, palmately 3-5-cleft or twice 2-cleft; cap com 5-6 mm hl; sds oval or globose, 4.5-5 mm lg, bk.

Variety **TENUIS** Ferguson. Ab 233.

Sts erect, 3-7 dm hl, with very slender branches, densely scaly-stellate; lvs narly oblong to lanceolate, 2-4.5 sm lg, 0.5-1 cm wide, entire; petioles 5-10 mm lg, less than 1/2 the length of lvs; stam fls about 2 mm broad; sta 10-12; sds 3-4 mm lg.

**C. GRACILIS** HBK Nov Gen et sp 2:69. Mex. B 2:69.

**C. MAGDALENSE** Millsp, Cal ac pr, sr 2, 2:220. Magdalena Island, Baja (Br).

**C. SETIGERUS** Hook Fl 2:141. Jepson, Er 1:13. B 2:68 as Eremocarpus S.

**C. SONORAE** T, bot Mex bound 2:194. P 2:90 Llano, Tex.

**CROTON TENUIS** S. Watson.

Wat 14:297. B 2:69.

**CRUCIFERAE** A 1:259d.

**CRYPTHIACTEUS** Nees, in Del Sem Hort Vlat 1841. = Ruellia fide IK.

**C. BARBADENSIS** Nees lc. B 1:588 as R. tuberosa.

**CRYPISIS** Ait oHrt Kew 1:48 (1789); 2: 505.

**C. MACROURA** HBK Nov Gen et sp 1: 140. B 2:276 as Cinna macroura (= Epicampes m, fide IK).

#### Genus **CRYPTANTHE** Lehm.

Sem Hort Hamb (1832). Fisch & Mey, Sem Hort Petrop (1836) 35. P 1:110. A 1:205 d.

**C. AFFINIS** P 1:119 based on Krynitzkia a. G.

**CRYPTANTHE AMBIGUA** Greene.

P 1:113 based on Krynitzkia a. G. Ab 334. A 1:205d. Ha 108.

Coville, CNH 4:164. Tejon mts.

**Eritrichium muriculatum** var. **ambiguum** Gray, Syn Fl 2, pt 1, 194 (1878).

Type locality: not given. Cal, Nev, Wash, Arizona? So Cal.

**Eritrichium angustifolium** Watson, bot Kings R, 241 (not Torr).

**Eritrichium muriculatum** Torr. Wilkes Esp xvii, t 13.

**C. ANGUSTIFOLIA** P 1:112 based on **Eritrichium** a. T.

**CRYPTANTHE BARBIGERA** Greene. P 1:114 based on **Eritrichium** b. G. A 1: 206d. Ab 334.

Type locality: not given. S Ber Co to S Ut and Ar.

Coville, CNH 4:165. Panamint mts. **Eritrichium barbigerum** Gray, Syn Fl 2 pt 1, 194 (1878).

Arizona: Southern California; Baja!

**C. CEDEROSENSIS** P 1:117 based on Krynitzkia C (P 1:206), of Cedros Island.



- C. CLEVELANDI** P 1:117. SD. Baja.  
**C. CONGESTA** P 1:111 based on *Eritrichium congestum* A DC. So Am.  
**C. CRASSISEPALA** P 1:112 based on *Eritrichium crassiseipala* T & G.  
**C. CYCLOPTERA** P 1:120 based on *Krynitzkia cycloptera* Greene, Cal ac b 1:207.  
**C. DENTICULATA** P 1:114 based on *Krynitzkia denticulata* Greene, Cal ac b 1:205.  
**C. DIMORPHA** P 1:112 based on *Eritrichium dimorphum* Philippi in herb Cal ac. Cordillera de Santiago (Philippi).  
**C. DUMETOEUM** P 1:112 based on *Krynitzkia* d.  
**C. ECHINELLA** P 1:115. Mt. Stanford.  
**C. FALLAX** P 5:54.  
**C. FENDLERI** P 1:120 based on *Krynitzkia* F. G.  
**CRYPTANTHE FLACCIDA** Greene.  
 Coville, CNH 4:165.  
 Type locality: not given. Douglas, collector.  
*Krynitzkia oxycarya* Gray.  
 P 1:115 based on *Myosotis flaccida* Lehm. Ab 334. A 1:206d.  
**C. FOLIOSA** P 1:113 based on *Krynitzkia* f. Guad.  
**C. GEMINATA** P 1:119. Truckee, Cal.  
**C. GLAREOSA** P 1:111 based on *Eritrichium glareosum* Philippi in herb Cal ac. Cordillera de Santiago (Philippi).  
**C. GLOMERATA** Lehm ex F & M, lc. P 1:110. Chlll. *Eritrichium cryptanthum* A DC.  
**C. GLOMERIFLORA** P 1:116. Truckee, Cal. C. grisea P 5:53.  
**C. HISPIDISSIMA** P 1:118. SLuis Obispo Co, Cal.  
**C. HORRIDULA** P 5:55.  
**CRYPTANTHE INCANA** Greene.  
 "Ann, freely branched from near base, branches ascending, 1° lg or less; whole plant cinerous-hispidulous and with a different minute strigose hairiness underneath the more copious hispid, indument: flg branches loosely spicate, bractless except at base: ex sm, sep sh, nar thruout, not with attenuate or prolonged apex: nutlets apparently 4, or sometimes 2 only, 1/2" lg, elongated-ovate above a truncate base, rather abruptly and obtusely pointed, the ventral groove forked at base and closed thruout, the whole surface greyish mottled with dark- brown, smooth and polished."—Gifts 1:79. On Nine-mile creek, 5800", Tulare Co, Cal.  
**CRYPTANTHE INTERMEDIA** Greene.  
 P 1:114 based on *Eritrichium intermedium* G. A 1:206d. Ab 334.  
 Coville, CNH 4:165.  
 LA; SD; Mohave Desert; Baja Cal.  
**C. JONESII** P 1:113 based on *Krynitzkia Jonesii* G. Ha 108.  
**CRYPTANTHE LEOCARPA** Greene.  
 P 1:117 based on *Echinosperrum leio-carpum* F & M. Ab 335. A 1:206d.  
 Santa Cruz Island (Greene).  
**C. LINEARIS** P 1:111 based on *Myosotis* l. Colla. So Am.  
**C. MAELITIMA** P 1:117 based on *Krynitzkia* m (P 1:265, San Benito Island; 1:291, San Bartolome bay, Baja).  
**C. MICROCARPA** F & M. P 1:111. So Am. *Eritrichium clandestinum* A DC.  
**C. MICROMERES** P 1:113, based on *Eritrichium micromeres* G.  
**C. MICROSTACHYS** P 1:116 based on *Krynitzkia* m. A 1:206d. Ab 334.  
**C. MOHAVENSIS** P 1:120 based on *Krynitzkia* M.  
**C. MONOSPERMA** P 5:53.  
**C. MURICULATA** P 1:113 based on *Eritrichium* m, a DC. A 1:207d. Ab 333.  
**C. NEMACLA** P 1:118. Colusa Co, Cal.  
**C. OXYGONA** P 1:120 based on *Krynitzkia oxygona* G.  
**C. PARTEERSONI** P 1:120 based on *Krynitzkia* P.  
**C. PATULA** P 1:265. San Benito Isl.  
**C. POLYCARPA** P 1:114. Truckee, Cal.  
**C. PONDII** P 1:291. San Bartolome bay, Baja.  
**C. PTEROCARYA** P 1:120 based on *Eritrichium* p.  
**C. PUSILLA** P 1:115 based on *Eritrichium pusillum* T & G.  
**C. RACEMOSA** P 1:115 based on *Eritrichium racemosum* Wat.  
**C. RAMOSA** P 1:115 based on *Eritrichium ramasum* A DC.  
**C. RAMOSISSIMA** P 1:116 based on *Krynitzkia ramosissima* Greene. A 1:207. Coville, CNH 4:165.  
*Krynitzkia ramosissima*, Greene, Cal ac b 1:203 (1885). Gray, Am ac pr 20:277.  
 Type locality: "Mohave Desert," Curran. Not from Cerros or Guadalupe Islands fide Greene.  
*Eritrichium racemosum*, Watson.  
*Krynitzkia racemosa* Greene, Cal. ac b 1:208.  
 CD (Parish 775). Baja mts and desert (Or.). San Julio canyon, etc., Baja (Br).  
**C. RATTANI** P 1:160, near San Jose, Cal.  
**C. ROSTELLATA** P 1:116 based on *Krynitzkia rostellata* (Greene, Cal ac b 1:203).  
**C. SIMULANS** P 5:54.  
**C. SPARSIFLORA** P 1:116 based on *Krynitzkia sparsiflora*.  
**C. TEXANA** P 1:112 based on *Eritrichium* T, A DC.  
**C. TORREYANA** P 1:118 based on *Krynitzkia* T. G.  
**C. UTAHENSIS** P 1:120 based on *Krynitzkia* U. G.  
**C. WATSONI** P 1:120, based on *Eritrichium leiocarpum* Wat.  
**CRYPTOCALYX** Bth, Ann nat hist, sr 1, 2:446 (1839). = *Lippia* fide IK.  
**C. NEPETAEOFOLIA** Bth lc. P 4:48 as *Phyla betulaeifolia*. DC Prod 11:584.  
**CRYPTOPLEURA** Nutt. Am phil sc tr, sr 2, 7:43 (1841). = *Troximon* fide IK.  
**C. CALIFORNICA** Nutt, lc. B 1:439 as *T. chilense* (= *heterophyllum* fide IK).  
**CRYPTOSTEMMA** R Br, Ait Hort Kew ed 2, 5:141 (1813).  
**C. CALEDULACEUM** R Br, lc. B 1: 298.  
**CUCUMIS** L. syst ed 1 (1735).  
**C. PERENNIS** T & G, Fl 1:543. B 1:239 as *Cucurbita* p. James, exp Rocky mts 2:346.  
 Genus **CUCURBITA** Linnaeus.  
 Rough prostrate vines, rooting at the nodes, with branched tendrils, com lobed lvs which are oft cordate at base, and

large y axy mon fls: ex-tube campanulate, 5-lobed; cor campanulate, 5-lobed to about the middle, lobes recurving; stam fls with 3 sta, the anth linear, more or less united; pist fls with 1 sty; ova oblong, with 3-5 many-ovuled placentae; sty sh, thick; stig 3-5, each 2-lobed, papillose; staminodia 3: fr large, fleshy, with a thick rind, many-seeded, indehiscent.

**C. CALIFORNICA** T. B 1:240. Wat 11: 137. A 1:41d. CD.

Type locality: "Sacramento valley", Cal.

**C. CORDATA** Wat. Baja.

**C. DIGITATA** G, Pl Wright 2:60, NM. B 1:239.

**C. FOETIDISSIMA** HBK Nov Gen et sp 2:123. Mex. Ab 384. Cov 109. Ha 122. Par 121. A 1:167d.

**CUCURBITA PALMATA** S. Watson.

Wat 11:137. Or, W 5:12. B 1:239. 2:449. Z 2:101.

Type locality: "SD Co, Cal; collected in Cajon valley, and at Larken's station near the Jacumba mts."

"Canescent with sh rough pubescence, appressed on the lvs: sts lfy: lvs thick, cordate in outline, 2 or 3; broad, palmately 5-cleft to the middle with lanceolate acuminate lobes, which are oft obtusely toothed near the base, usually exceeding the petioles: fls 3 l lg, on stout pedicels, lobes acutish: ex-tube 1 l lg, the teeth broader and 3 l lg or more; fr globose: sds 5 l lg."—B 1:239 (1876).

**C. PERENNIS** G. Pl Lindh 193. B 1:239. 2:448. Z 2:101. A 1:167 as foetidissima.

**CUPHEA** P Br, Hist Jamaica 216 (1756).

**C. MESOCHLOA** P 1:141 based on viridostoma Wat.

**C. VIRIDOSTOMA** Wat 22:412. P 1:141 as mesochloa.

#### Genus CUPRESSUS Tournefort.

L, Gen ed 1, 297 (1737). A 2:407d.

**C. ATTENUATA** Gord Plinet 57. B 2:115 as Chamaecyparis Lawsoniana.

**C. FRAGRANS** K 1:103. B 2:115 et Cur 1:147 as Chamaecyparis Lawsoniana.

**C. GOVENIANA** Gord, J Hort sc 4:295. B 2:114.

**C. GUADALUPENSIS** Wat 14:300. B 2:114. A 1:189d. 2:408d.

**C. HARTWEGII** Carr in Rev Hort 1855: 233. B 2:114 as macrocarpa.

**C. LAMBERTIANA** Gord ex Carr Conif 124. B 2:114 as macrocarpa.

**C. LAWSONIANA** A Murr, Edinb New Phil J n sr, 1:292 t 9 (Ja-Apr 1855). B 2:115 as Chamaecyparis L.

**C. MACNABIANA** A Murr, lc 293. B 2:114.

**C. MACROCARPA** Hartw, J Hort sc 2: 187 (1847). B 2:113. A 2:407d.

**C. KUTKANUS** T, bot US expl 2: t 16. B 2:115 as Chamaecyparis Lawsoniana.

**CUSCUTACEAE** A 1:208d.

**CUSCUTA** L, syst ed 1 (1735). A 1:208d.

**C. APPLANATA** E, StL ac tr 1:503. B 1:535.

**C. ARVENSIS** Beyrich, Hook Fl 2:77. B 1:535. Ab 310. A 1:345d.

**C. CALIFORNICA** Choisy, Cuso 183. H & A bot Beech 364. B 1:535. Z 2:232. Ab 310. A 1:345d.

Variety **LONGILOBA** E. Da 12. So Cal, Ar.

Variety **BREVIFOLIA** E. Monterey, Cal.

**C. CEANOTHI** Behr, Cal ac pr 1:17. Pacific SD 1884. Cur 1:144 "evidently subinclusa".

**C. DECORA** Choisy ex E, StL ac tr 1:501. US, Brazil, SBR (Parish 539). B 1:536.

**C. DENTICULATA** E, Am nat 9:348. B 1:536.

**C. OBTUSIFLORA** HBK Nov Gen et sp. 3:122. B 1:535.

**C. ODONTOLEPIS** E, StL ac tr 1:486. B 1:535.

**C. RACEMOSA** Mart Reise Bras 1:286. Brazil. B 2:471.

**C. PATENS** Bth bot Sulph 35. P 1:292 San Bartolome bay, Baja.

**CUSCUTA SALINA** Engelm.

B 1:536. Z 2:366. Ab 311. Par 165.

**C. SUAVEOLENS** Ser in Ann Sc Phys nat Agr et Ind 3:519. B 2:471 as racemosa variety chiliana E.

**C. SUBCILIATA** Dur & Hilg, Phil ac J, sr 2, 3:42. Greene, Cal ac b 2:408 Cruz. B 1:536. Da 12. Ab 311.

**C. TENUIFLORA** E, G Man ed 1, 350. B 1:535.

**C. UMBELLATA** HBK Nov Gen et sp 3: 121. B 1:535.

**C. VEATCHII** Br 2:189. Ubl, San Enrique and Santa Maria, Baja.

**CYLADENIA** Bth Pl rartw 322 (1850).

**C. HUMILIS** Bth lc 323. McClatchie, Er 2:123. LA Co, 8000' alt. B 1:474.

**C. TOMENTOSA** G, B 1:474.

**CYCLOBOTHRUS** D DON, Sweet Brit Fl Fl Gard, sr 1, 3: t 273 (1828). = Calochortus fide IK.

**C. ALBUS** Bth Hort sc tr ns, 1:413 t 14. B 2:172 as Cal. albus.

**C. CAERULEA** K 2:4. B 2:173 et Cur 1: 150 as Cal. caeruleus.

**C. ELEGANS** Bth, bot reg t 1662. B 2: 174 as Cal. elegans (Hook. bot mag t 5976 = Cal. Maweanus fide B 2:173).

**C. PANICULATA** Lindl, bot reg t 1662. B 2:172 as Cal. albus variety paniculatus Baker.

**C. PULCHELLA** Bth. Hort sc tr, ns, 1: 412. B 2:173 as Cal. pulchellus.

**CYMBIDIUM** Sw in Nov act sc upsal 6:70 (1794).

**C. HIEMALE** Willd. B 2:133 as Aplectrum hiemale T.

**CYMOPTERUS** Raf, J Phys 89:100 (1819).

**C. ALBIFLORUS** T & G Fl 1:625. B 1: 266 as terebinthinus T & G.

**C. CINERARIUS** G 6:535. B 1:267.

**C. DECIPIENS** Z 2:246.

**C. FOENICULACEUS** Nutt, T & G Fl 1: 624. B 1:266 as terebinthinus.

**C. FENDLERI** G, Pl Fendl 59. Tex. Parry, Wyo 4. Z 2:229.

**C. GLOBOSUS** Watt 11:141. B 1:267.

**C. GLAUCUS** Nutt, Phil ac J 7:28. Z 2: 229.

**C. GLOMERATUS** DC Prod 4:204. Z 2: 246.

**C. MEGACEPHEALUS** Z 2:14.

**C. MONTANUS** Nutt, T & G Fl 1:624. B 1:266. Z 2:229. Parry, Wyo 4.

**C. NEVADENSIS** G 6:536. B 1:267, 2: 451.

**C. PURPUREUS** Z 2:22.

**C. TEREBINTHINUS** T & G Fl 1:624. B



1:266.

C. THOPSOIDES Nutt, T &amp; G Fl 1:624. B 1:266 as terebinthinus.

CYNAPSIUM Nutt, T &amp; G Fl 1:640 (1840). = Ligusticum fide IK.

C. APIIFOLIUM Nutt, T &amp; G Fl 1:641. B 1:264 as L. apifolium.

C. BIGELOVII T, Pac Ry R 4:94. B 1:271 as Ferula dissoluta Wat.

Genus CYNARA L. Artichoke.

Stout per prickly herbs, with pinnatifid sessile lvs, their lobes spinescently tipped, and large hds of p tubular fls: inv-bracts well-imbriated, coriaceous, spinescent; receptacle fleshy, fimbriate: ak obovate, compressed and somewhat 4-angled: pap of many series of plumose bristles.

C. CARDUNCULUS L.

Parish, Er 7:97, "rare as a wayside escape at Sber; SD Co near Smith mt."

C. SCOLYMUS L. A 1:198d. Ab 442. B 1:417.

Abrams, Fl LA 442. An occasional escape from gardens. Je-Jl.

CYNODONTIUM.

C. CERNUUM Hedw, Musc Frond t 9. B 2:392 as Bryum c.

C. FLEXICAULE Schwaegr, suppl 1:113 t 29. B 2:366 as Leptotrichum f.

CYNOGLOSSUM L, syst ed 1 (1735).

CYNOGLOSSUM COLESTINUM Lindl.

C. GLOMERATUM Fraser Cat 1813 ex Pursh Fl 2:729. B 1:528 as Eritrichium g. P 1:58 as Oreocarya glomerata.

C. GRANDE Dougl ex Lehm Pugill 2:25. Par 264 t. B 1:530.

C. LAEVE G, syn fl 2 (1):188. B 2:469.

C. LATERIFLORUM Lam, Enc 2:239. B 1:531 as Pectocarya lateriflora (= linearis).

C. LINEARIS R &amp; P. A 1:204 as Pectocarya l.

C. OCCIDENTALE G 10:58. B 1:531.

C. OFFICINALE L, sp pl 134. Eu. B 1:531.

C. PENICILLATUM H &amp; A, bot Beech 371. B 1:531 and A 1:204 as Pectocarya p.

C. PILOSUM R &amp; P. B 1:531 as Pectocarya lateriflora (= linearis).

CYNOSURUS L, Gen ed 1. 13 (1737).

Ann or per tufted, with flat lvs and dense spk-like inf: spkt consisting of nar empty gms with a continuous rach, the terminal spkt of 2-4 broader gms with articulate rachilla, and subtending perfect fls: 2 outer gms broad, 1-3-nerved, pointed or sh-awned; upper gms nar'er, com empty; gms of the sterile spkt pectinate, spreading, linear-subulate; 1-nerved: sta 3: sty distinct, sh: grain finally adherent to the palea.

C. CRISTATUS L, sp pl 72. Eu. Ab 48.

Per; cu tufted, erect, slender, 3-6 dm hi; sheaths smooth, sh'ter than internodes; blades of cu flat, 2-10 cm lg, 1.5-3 mm wide; spk nearly cylindric, oblg or linear, 3-10 cm lg; the clusters of spkt all turned to one side, the empty ones forming inv to each cluster. Eu. inv to each cluster. Eu.

Genus CYPERUS Linnaeus.

Ann or per herbs: sts mostly simple, triangular, lfy near the base and with 1 or more involucre lvs at base of sim-

ple or compound, umbellate or capitate inf: rays of umbel sheathed at base, com very unequal: spkts flat or nearly terete, composed of few-many persistent or decid scales, these concave, conduplicate or keeled, 2-ranked, all fl-bearing or the lower empty: fls perfect: Perianth 0: sta 1-3: sty 2-3-cleft, decid from summit of the lenticular or 3-angled ak. Galingale. C. ACUMINATUS Torr & Hook, NY Lycann 3:435. B 2:214.

CYPERUS ARISTATUS Rottb.

Rottl Disc Nov Pl 22; Prog 16. B 2:214. Ha 64.

C. AUREUS Presl, Rel Haenk 1:168. B 2:214 as aristatus Rottb. = squarrosus fide IK.

C. CALIFORNICUS Wat, B 2:216.

C. CASTANEUS Bigel, Fl Bost 3, 19. B 2:214 as diandrus variety castaneus T.

C. COMPRESSUS L, sp pl 46. B 2:214 (cites of Haenke's coll from Monterey, Cal, as probably diandrus).

C. CUPREUS Presl, Rel Haenk 1:172. B 2:215 as erythrorrhizos Muhl.

CYPERUS DIANDRUS Torrey.

T, cat pl NY 89. B 1:214.

Variety CAPITATUS Britton. Ab 65: LA, Sber.

Sts tufted slender, 1-4 dm hi; lvs about 2 mm wide, those of the inv 1-2, elongated; spikelets sessile in a capitate cluster, appearing somewhat lateral, 8-20 mm lg, linear or linear-oblong; scales with brown margins appressed, coriaceous, obtuse, shining; sta com 3; sty 2-cleft, scarcely exserted; ak lenticular, oblg or oblg-ovate, somewhat pointed, dull. Variety CASTANEUS T. B 2:214. Da 18. = variety capitatus fide Ab 65.

C. ERYTHORRHIZOS Muhl, Desc Gram 20. B 2:215. Ab 66. McClatchie, Er 2:78 LA.

Ann; sts tufted, com rather stout, 2-6 dm hi; lvs 3-8 mm wide, equaling or exceeding st, rough-margined, those of inv 3-7, lger much exceeding umbel; umbel mostly compound; spkt linear, subacute, 6-20 mm lg, less than 2 mm wide, many-fid, clustered in oblg nearly or quite sessile spikes; scales chestnut brown, oblg-lanceolate, mucronulate; rachis with membranaceous wings separating as a pair of hyaline interior scales; sta 3; sty 3-cleft; ak sharply 3-angled, oblg, pointed at both ends, pale,  $\frac{1}{2}$  as lg as scale.

CYPERUS ESCULENTUS Linn.

L, sp pl 45. Da 18. B 2:215. Eu. Da 18, Er 1:100 LA Co, Ab 66.

Per by scaly horizontal tuber-bearing rtstocks; sts rather stout, 3-6 dm hi; lvs light g, 4-8 mm wide, usually longer than st, with prominent midvein, those of inv 3-6, longer much exceeding umbel; umbel 4-10-rayed, usually compound; spikelets num in loose spks, straw-colored or y'ish brown, spreading, 12-24 mm lg, 3 mm wide, many-fid; scales ovate-oblong, subacute, 3-5-nerved; rachis narrowly winged; sta 3; style 3-cleft; ak obovoid, obtuse, 3-angled.

Frequent in river bottom about LA and Sber.

C. FERAX Richard, act sc hist nat Par 1:106. B 2:216. Tropical. Cal (Muir).

C. FLAVOMARISCUS Griseb Fl Brit WI 567. B 2:216.

**C. FLAVUS** Bocck, Linn 36:384. B 2:216 as flavomarisceus.

**C. HAENKEI** Presl, Rel Haenk 1:181. B 2:216 as flavomarisceus.

**C. HERMANNI** Buck, Phil ac pr 1862:10. B 2:215 as phymatodes variety Hermannii.

**C. INFLEXUS** Muhl, Desc Gram 16. B 2:214 as aristatus Rottb. Ab 66: Bear, etc.

Sts very slender, tufted, 3-15 cm hi; lvs 2 mm wide or less, nearly equaling the sts, those of the inv 2-3, exceeding umbel; sessile, com capitate; spikelets linear-oblig, 4-6 mm lg, 6-10-fld; scales pale brown, lanceolate, firm, tapering into a lg recurved awn; sta 1; sty 3-cleft; rachis narly winged, wings persistent; ak 3-angled, narly obovoid or oblig, obtuse, mucronulate.

**CYPERUS LAEVIGATUS** Linn.

Mant 2:179. B 2:214. Da 18. Ab 66: LA, Sber.

Per, with slender creeping rhizomes; sts tufted, slender, 8-15 cm hi, terete, with 2-3 sh brown sheaths at base, the upper bearing a sh, erect, subtriangular lf, otherwise naked; inv of com 2 lf-like bracts, 1 a continuation of st, erect, the other spreading, 3 cm lg or less; umbel sessile, capitate, apparently lateral; spikelets sessile, many-fld, 4-6 mm lg, pale g; scales broad, obtuse, about 2 mm lg; rachis deeply pitted transversely; sta 3; sty 2-cleft; ak broadly obovate, 12 mm lg.

**CYPERUS MICHAUXIANUS** Schult.

Mant 2:123. B 2:215.

**C. MUCRONATUS** Rottb Disc Nov Pl 19. B 2:214 as laevigatus.

**CYPERUS OCCIDENTALIS** Torr.

NY Lyc ann 3:259. B 2:215 as erythrorrhizos.

**C. PHYMATODES** Muhl, Disc Gram 23. B 2:215 = esculentus fide IK.

Variety **HERMANNI** B 2:215, based on Hermannii Buckl.

**C. PUBESCENS** Presl, Rel Haenk 1:181. B 2:216, as perhaps flavomarisceus.

**C. REPENS** Ell, sketch 1:68. B 2:215 as phymatodes (=esculentus fide IK).

**C. RIVULARIS** Kunth En 2:6. Boeck, Linn 35:452. B 2:214 as diandrus castaneus.

**C. SORDIDUS** Presl, Rel Haenk 1:171. B 2:215 as ? virens (same fide IK).

**C. SPECIOSUS** T, bot Mex Bound 226. B 2:216 as Californicus.

**C. STENOLEPIS** T, Cyp 263. B 2:215—NC, Fla, Tex, NM, Sacramento valley, Cal.

**C. TENELLUS** Presl, Rel Haenk 1:176. B 2:214 as ? diandrus castaneus.

**CYPERUS VIRENS** Michx Fl 1:29. Parish, SCAB 8:7, Sber Co. Fl 1:28. B 2:214. Dela, Tex, Sacramento valley.

**Genus CYPRIPEDIUM** Linnaeus.

L, svst ed 1 (1735).

**C. CALIFORNICUM** G 7:389. B 2:138, 484. Par 390.

**C. FASCICULATUM** K, Pac Rur Press My 1879. Wat 17:380. Cur 1:148.

**C. MONTANUM** Dougl, Lindl Orch 528. Par 388 t. B 2:138. Z s:166. A 1:376d.

**C. OCCIDENTALE** Nutt 1:147. B 2:138 as montanum.

**CYPSOLEA** Turp, in Ann mus Par 7:219. (1806).

**C. HUMIFUSA** Turp, lc, t 121 f 5. Santa Cruz, Cal, cult (Parry, in Or hb 97). Santo Domingo Isl.

**CYTHORHYNCHIA** Nutt, ex T & G Fl 1:26 (1838). = Ranunculus fide IK.

**C. NEGLECTA** P 4:146.

**C. RANUNCULINA** Nutt, lc. P 3:193. = R. Nuttallii fide IK.

**CYTHIEREA** Salisb in Hort sc tr 1:301 (1812). = Calypso fide IK.

**C. OCCIDENTALIS** M 1:132.

**C. BOREALIS** Salisb, lc. = Cal. borealis fide IK.

Genus **CYTISUS** Linnaeus.

Shrubs with g, lfy or sometimes nearly lfless, more or less angular branches: lvs palmately or pinnately 3-foliolate; lfts entire: fls solitary or racemose, com y; cx bilabiate; pet broad; keel obtuse: stamona delphous: pod compressed, several-seeded. Broom.

**C. CANARIENSIS** Steud nom ed i, 259. Ab 210. Canary Isl, cult, an occasional escape.

Much branched, 1-2 m hi, soft pubescent, lfy: lfts 6-12 mm lg; fls y, 15-20 mm lg, fragrant, in terminal racemes; upper cx-lip deeply 3-toothed, the lower slightly so.

**DACTYLIS** L, Gen ed 2:29 (1742).

**D. GLOMERATA** L, sp pl 71. Eu. Ab 48. Da 19. B 2:301. Z 1:188.

**Genus DALEA** Linnaeus.

L, Hort Cliff 263 t 22 (1737).

Cx nearly equally 5-cleft or toothed: standard cordate, fls claw free: wings and keel com lger; their claws adnate to and jointed upon the cleft staminal tube: sta 10 (or 9), monadelphous; anth uniform: ova 2 (nearly 4-6-) ovuled: pod ovate, compressed, com indehiscent, included in cx, 1-2-sds. Herbs or shrubs, glandular-punctate: lvs unequally pinnate, very rarely digitately 3-foliolate or simple; lfts sm, entire, sometimes stipelate; stipules sm, subulate; fls nearly sessile in terminal pedunculate spikes or rarely solitary. About 100 sp, ours peculiar to the arid sections.

**D. ALBIFLORA** G, Pl Wright 2:38. B 1:141. Ar. NM.

**D. ELOPECAROIDES** Willd, sp pl 3:1336. B 1:141. Ar to Miss.

**D. AMOENA** Wat, Am nat 7:300 (My 1873).

"Shrubby, much branched; pubescence sh, silky, dense only in upper axils; lfts 7-11, narly linear, 3-4" lg, obtusish; fls loosely racemed, few, large, deep-p; pedicels 1" lg; cx pubescent, 3-5" lg, lanceolate acuminate teeth equalling tube; pet 6" lg; ova densely pubescent.—Allied to D. Fremontii, Johnsoni and Schottii. Northern Ar (Mrs. E. P. Thompson). In damp places; Ap."

**D. ARBORESCENS** T, G, Pl Thurb 316. B 1:142. A 1:378d.

**D. BENTHAMII** Br. 2:148. Santa Margarita Isl.

**D. BRACHYSTACHYS** G Pl Wright 2:33. B 1:141. Ar. NM.

**D. CALIFORNICA** Wat 11:132. B 1:142. 2:441. A 1:378d.

**D. CALYCOSA** G, Pl Wright 1:40. B 1:142.

**D. CANESCENS** Bth, Bot Sulph 12. Br



2:145.

**D. CHERYSORRHIZA** G 5:156 Mex. Br. 2:145, Cardon Grande, Baja.**D. DIVARICATA** Bth, Bot Sulph 12. Br. 2:145 Magdalena Isl.Variety **CINEREA** G 7:335. B 1:142 as Parryi.**D. EMORYI** G, Pl Thurb 315. T, Pac Ry R 5:360 t 11. B 1:142. Br 2:147, Cajon de Santa Maria, Baja, etc. A 1:378d.**D. EVANESCENS** Br 2:146, near San Ignacio, Baja.**D. FORMOSA** T, NY ann Lye 2:177. Br 2:147, San Esteban, Baja.**D. FREMONTII** T, ex G Pl Thurb 316. Wat, bot king 65. B 1:143. 2:441. Nev.**D. KINGII** Wat, bot king 64 t 10. B 1:143. Nev.**D. LAEVIGATA** G, Pl Wright 2:38 NM. R 1:141 Ar.**D. LANATA** Spreng, syst 3:327. Br Colo 234.**D. MEGACARPA** Wat 20:359. P 1:202 Cedros. Br 2:148, San Julian, Calamujet, Baja. Son.**DALEA MOLLIS** Benth.

Bth 306. B 1:141. Ar, NM, Ft Mohave.

**D. NANA** T, ex G, Pl Fendl 31. B 1:141. M 1:30.**DALEA ORCUTTH** S. Watson.

Wat 20:359. A 1:72 fdr.

**D. PARRYI** G 7:397. B 1:141. Br 2:145 Santa Margarita Isl. A 1:378d.**D. POLYADENITA** T, ex Wat bot king 64 t 9. B 1:142. 2:441. Nev.**D. RAMOSISSIMA** Bth, bot sulph 11 t 10. T, Emory's rec 138. Br 2:146 Magdalena Isl.**DALEA SAUNDERSII** Parish.

"A shrub 6-10 dm hi, the old bark smooth and gray, the new growth sparsely hirsute; glands few, prominent and prickly-like; lifts 2-3 pairs narly lanceolate to oblanceolate, 5-15 mm lg, the margins revolute; fls in a nar elongated raceme, sh pedicellate, 1 cm lg, 'ultra-marine blue'; ex 5 mm hi, its teeth sh'er than tube, acute, upper pair broadened at base, ciliate; stig hirsuit, becoming 1 cm lg; ovules 4."—Parish, SCAB 2:83 t 2.

Type locality: "Desert sands, near Victorville, cir 3000° alt, in the Mohave Desert."

**D. SCHOTTII** T, bot Mex bound 53. B 1:143. Br 2:148 Cajon de Santa Maria, Baja. A 1:378d.**D. SEEMANNI** Wat 22:470. Br 2:146 San Esteban, Baja. A 1:378 fdr. Durango?**D. SPINOSA** G, Pl Thurb 315. T Pac Ry R 7: 9 t 3. B 1:143. Br 2:148 Calamujet, Baja. A 1:379d. = *Asagraea spinosa* fide IK.**D. TICSTORIA** Br 2:147, San Gregorio Baja, "staining the legs of animals y"—as do various other sp!Variety **ARENARIA** Br 2:147, sands of the sea shore, Boca de Soledad, Baja.**D. VETULA** Br 2:146, Comondu, San Gregorio, Baja.**D. WISLIZENI** G, Pl Fendl 32 NM. B 1:142. Ar, Chilhuahua (Wislizenus).**DAMASONIUM** Mill, Gard Diet ed 6 (1752).**D. CALIFORNICUM** T, Pac Ry R 4:142 t 21. B 2:200. = *Alisma Californica* fide

IK.

**DAPHNIDOSTAPHYLIS** Glotzsch in Linn 21:79 (1851). = *Arctostaphylos* fide IK.**D. ACUTA** lc 81. = *A. Hookeri* ? fide IK.**D. CORDIFOLIA** lc 80. = *A. tomentosa* fide IK.**D. FENDLERIANA** lc 80. = *A. uva-ursi* fide IK.**D. GLAUCA** lc 80. = *A. glauca* fide IK.**D. HOOKERI** lc 80. = *A. Hookeri* fide IK (pungens fide B 1:453).**D. PUMILA** lc 81. = *A. pumila* fide B 1:453.**D. PUNGENS** lc 80. = *A. pungens* fide B 1:453.**D. TOMENTOSA** lc 79. = *A. tomentosa* fide IK.**DARLINGTONIA** T, Smith Cont 6:4 t 12 (1854). = *Chrysamphora* fide Greene.**D. CALIFORNICA** T, lc 5. B 1:17. Par 396 t. = *C. Californica* Greene.**DARLUCA** Raf in Ann Gen sc Physc 6: 87 (1820). = *Faramea* fide IK.**D. PILUM** M 1:23.**D. PROSTRATA** Raf, New Fl Am 4:55. = *F. odoratissima* fide IK.**DASYLEION** Zucc, AGZ 6:258, 303 (1838).**D. BIGELOVII** T, Pac Ry R 4:151. B 2:163 as *Nolina* B.**Genus DATISCA Linnaeus.**

Stout glab herb; lvs divided and more or less incised and sharply serrate; fls fasciated in the axils on sh pedicels: cx of stam fl very sh (less than 1" lg), with 4-9 unequal lobes; sta in ours 8-12, mostly 10; fl sh; cx of pist fls with ovoid tube, somewhat 3-angled, 3-toothed, 3-4" lg; sta (when present) 2-4, alt with teeth: sds num, sm, in 2 to several rows upon the placentae.

**DATISCA GLOMERATA B. & H.**

Eastwood Zoe 5:136. "Weum Kall" of the Yokala tribe of Pomas Indians, who use it to stupefy fish so that they may easily catch them, in the same manner as the amole (*Chlorogalum Pomeridianum*) and the Turkey-mullein (*Eremocarpus setigerus*) or "Perba del Poscado" of the Mexicans.

A 1:41d. B 1:242, 2:449. Da 7. Ab 257. *Tricerastes glomeratus* Presl, Rel Haenk 2:88 (1835).

Type locality: "In parte occidentali Mexici et in California ad Monte-Rey."

**Genus DATURA Linnaeus.**

Ann or per erect branching narcotic herbs, with alt petioled entire or sinuate-dentate lvs, and large showy solitary sh peduncled fls: cx elongated-tubular or prismatic, 5-cleft or spathe-like, circumscissile near the base; cor funnelliform, the limb plaited, 5 lobed, lobes broad, acuminate: sta inserted at or below middle of cor; fl filiform, elongated; ova 2-celled, or falsely 4-celled; sty filiform; stig slightly 2-lobed; cap 4-valved from top or bursting irregularly, ovoid or globose, prickly.

**D. ARBOREA** L, sp pl 179. B 1:543.**D. DISCOLOB** Bernh in Trom NJ Pharm 26: 149. Cf Linn 8 (1833) Litt 138. Mex. B 1:544.

Cor p'ish; cap and stout prickles pubescent. Baja (Or 2190).

D. **METEL** Moc & Sesse, DC Prod 13 (1): 544. = meteloides fide IK. Variety **QUINQUECUPIDA** T, Pac Ry R 7:18. B 1:544 as meteloides.

**DATURA METELOIDES** DC.

Prunose-glaucous, erect, branching, 6-10 dm hi from a per rt; lvs unequally ovate, more or less coarsely repandentate or nearly entire; ex cylindric, about 8 cm lg; cor w or tinged with violet, 15-20 cm lg, limb about 10 cm broad, with 5 slender subulate teeth; cap drooping in fr, 5 cm in diam, densely prickly.

Type locality: "in calidis Novae Hispaniae regionibus."

DC Prodr 13 (1): 544 (1852). Greene, Cal ac b 2:408, Cruz, B 1:544. Da 12. Z 2: 232. Ab 352. Cov 168. Par 54.

D. **QUERCIFOLIA** HBK Nov Gen et sp 3:7. Mex. B 1:544.

D. **STRAMONIUM** L, sp pl 179. Ab 353. Par 97. B 1:544.

Stramonium or Jamestown-weed. Ann, g, glabrous. 2-10 dm hi; lvs sinuately and lacinately angled and toothed; ex prismatic; cor w, about 8 cm lg; cap erect, thickly armed with sh stout prickles.

D. **SUAVEOLENS** Humb & Bonpl ex Willd En Hort Berol 227. Mex. Par 97.

D. **TATULA** L, sp pl ed 2, 256. B 1:544, 2:471. Parish, Z 1:123. = Stramonium fide IK.

D. **THOMASII** T, Pac Ry R 5:362. B 1: 544 as discolor.

D. **WRIGHTII** Regel, Gartenfl 8: t 260. B 1:544 as meteloides.

#### Genus **DAUCUS** Tournefort.

L, syst ed 1 (1735). A 1:268 d.

D. **BRACHIATUS** T, Pac Ry R 4:93. B 1:273. = *Caucalis microcarpa* fide IK.

D. **DAUCUS CAROTA** L, sp pl 242. Ab 292. Z 2:27. Da 7. Er 1:59 LA Co. A 1:268d.

D. **DAUCUS IUSILLUS** Michx. Michx Fl 1:164. Br, Z 1:114 Cat. Bloch, Er 1:232, 233 "Yerba del Vibora"—note on medicinal use. Greene, Cal ac b 2: 399 Cruz. Br 1:211 Rosa. P 1:88 Mig. Ab 292. Z 1:22. 2:354. Da 7. B 1:272. 2: 452. A 1:268d.

D. **DECODON** J F Gmel, syst 677 (1791). = *Nesaea* fide IK.

D. **VERTICILLATUM** Ell sketch 1:543. P 1:42. = *N. verticillata* fide IK.

D. **AQUATICUM** Gmel, lc. = *N. verticillata* fide IK.

Genus **DEINANDRA** Greene.

Erect, rigid, brittle, balsamic-viscid an; hds mostly sm, few-fid, panicle; lvs serrate or entire: Inv bracts few, half enclosing their ak, their tips sh, rigid, erect; rays com 5, broad, 3-toothed, diurnal: receptacle chaffy only next the rays: ray-ak gibbous; tuberculate-rugose, the terminal areola raised upon a distinct curved beak from the angle of ventral face of ak; disk-ak mostly sterile, with or without a paleaceous crown.

D. **DEINANDRA FASCICULATA** Greene. A 1:193d. Ab 421.

Hemizonia fasciculata T. & G.

D. **DEINANDRA KELLOGGII** Greene. Abrams, Fl LA 422. Pasadena.

A 1:193d.

**DEINANDRA WRIGHTII** Greene.

Abrams, Fl LA 422. Sber.

A 1:193d.

D. **DELPHINIUM** L, syst 1 (1735). A 1: 151d.

D. **APICULATUM** P 1:285, plains of the San Joaquin near Byron Springs, Cal.

D. **BICOLOR** Nutt, Phil ac J 7:10. B 1:11.

D. **CALIFORNICUM** T & G Fl 1:31. B 1: 11.

D. **CARDINALE** Hook, bot mag t 4887. Par 370. B 1:12. 2:428. Da 1. Ab 153. A 1:151d.

D. **CONSOLIDA** L, sp pl 530. Eu. A 1:152.

D. **COCCINEUM** T, Pac Ry R 4:42. B 1: 12 as cardinale.

D. **COGNATUM** P 3:14.

D. **DECCURM** F & M, Ind sem Hort Petrop 3:33. B 1:11. Da 1. Ab 153. A 1:152d.

Variety **PATENS** G. Ab 153. A 1:152d.

D. **DEPAUPERATUM** Nutt, T & G Fl 1: 33. B 1:11. A 1:152d.

D. **DIVERSIFOLIUM** P 3:93.

D. **ELATUM** L, sp pl 531. Eu.

Variety **OCCIDENTALE** Wat bot king 11. B 1:11. 2:428 as occidentale.

D. **EXALTATUM** H & A bot Beech 317. B 1:11 as Californicum.

D. **FLAMMEUM** K 2:22. Cur 1:130 as cardinale.

D. **GLABRUM** P 3:257.

D. **GLAUCUM** Wat, B 2:427.

D. **GRAECILENTUM** P 3:15.

D. **HANSERI** P 3:94.

D. **HESPERIUM** G, bot gaz 12:51. A 1: 152.

D. **DELPHINIUM LUPORUM** Greene.

"Rt apparently woody-fibrous: solitary st over 1' hi, slender, sparsely lfy except at base, very light-g, glab and shining: lowest lvs 5-parted, seg round obovate and with 2 or 3 broad rounded and rather deep lobes, those of st with more cuneiform divisions and acute lobes, or the divisions simple and entire and oblanceolate cut in those next below the rather naked peduncled raceme; this very lax, made up of only 5-7 large fls on lg and slender ascending pedicels; the pedicels and the lg straight slender-conical spur loosely villous-pubescent: sep all deep-blue p, each with a very prominent tho nar apiculation; ovaries canescently villous."—Gifts 1:76. Coyote creek, Tulare Co, Cal.

D. **MENZIESII** DC syst 1:355. B 1:11. Parry, Wyo 4. SD Co!

Variety **UTAHENSIS** Wat, bot king 12. B 1:11 as bicolor Nutt.

D. **NELSONI** P 3:92.

D. **NUDICAULE** T & G Fl 1:33. B 1:12. 2:428. Par 352 t. A 1:151d.

D. **OCCIDENTALE** Wat, B 2:428. Coulter, Man Rocky mts 11.

D. **PARRISHII** G, bot gaz 12:53. Cov 57. A 1:152.

D. **PARRYI** G bot gaz 12:50. Da 1. Ab 153. Br 21:201, Cruz; 206 Rosa; 224 Santa Inez mts. A 1:152d.

D. **PATENS** Bth 296. A 1:152 et. B 1:11 as decorum.

D. **PAUPERECULUM** P 1:288, Wash, near the sea coast.

D. **RECURVATUM** P 1:285, Antioch to Tulare, Cal, along the San Joaquin river.

D. **SARCOPHYLLUM** H & A bot Beech



317. B 1:12 as nudicaule var. *elatus*.  
**D. SCAPOSUM** Greene, bot gaz 6:156, NM. Z 2:227. A 1:152.  
**D. SCOPULORUM** G, Pl Wright 2:9, NM. B 2:428. Par 334.  
**D. SIMPLEX** Dougl, Hook Fl 1:25. B 1:10. A 1:153d.  
**D. SONNEI** P 3:246.  
**D. TROLLIFOLIUM** G 8:275. B 1:112: 428. Z 2:285.  
**D. VARIEGATUM** T & G Fl 1:32. B 1:10. Da 1. A 1:153d. Ab 153.  
**DENDROMECON** Bth, Hort sc tr, sr 2, 1:407 (1834). A 1:161d. Monotypic! (see *rigidum*).  
**D. AGNINA** P 5:296, 299d.  
**D. ARBOREA** P 5:297, 306d.  
**D. CAESIA** P 5:297, 303d.  
**D. CAUDATA** P 5:296, 298d.  
**D. DENSIFOLIA** P 5:297, 304d.  
**D. ELLIPTICA** P 5:297, 300d.  
**D. FASTIGIATA** P 5:296, 298d.  
**DENDROMECON FLEXILE** Greene. Torr cl b 13:218 (N 1886); Cal ac b 1:389. 2:389, Cruz; P 1:43. Br, Z 1:47 as form of *rigidum*. A 1:71 fdr, 72 as *rigidum*.  
**D. FLEXILIS** P 5:297, 304. = *flexile*.  
**D. HARFORDII** K 5:102. Cur 1:130:—"A peculiar form of *D. rigidum*, with thickly clustered very broad lvs, coll on Rosa by W. G. W. Harford." P 1:43. 5:299. Z 1:46 as *rigidum*. B 1:22 as *rigidum*. A 1:72, 161 as *rigidum*.  
**D. HERACEA** P 5:297, 303d.  
**D. LIOPHYLLA** P 5:297, 302d.  
**D. PALLIDA** P 5:297, 301d.  
**D. PUMILA** P 5:297, 302d.  
**D. QUERCETORUM** P 5:297, 301d.  
**D. RHAMNOIDES** P 5:297, 305d.  
**DENDROMECON RIGIDUM** Benth. Curran, Cal ac pr sr 2, 1: 244, refers *D. Harfordii* and *D. flexile* to this.  
 Hort sc tr, sr 2, 1:407. B 1:22, 2:429. Da 2. Z 1:46, 2:120. Ab 160. Br 1:207 Rosa (cites Harfordii and *flexile* as synonyms). Ha 81. Par 122t. A 1:72d, 161. P 1:43, 5:296, 297. Br, Z 1:46:—"nearly truest Cal, Cat, Cruz, Rosa, etc." Jepson, Er 2:14, notes fasciculation, not rare in this sp. All the other "species" of the genus may well be considered as synonyms!  
**D. SALIGNA** P 5:297, 300d.  
 Genus **DENTARIA** Linnaeus.  
 Per herbs growing in damp woods, with fleshy tuberous rt-stocks, erect mostly unbranched sts and more or less divided lvs: fls large, w or oft tinged with p: pet much lger than sep with slender claw and ovate spreading blades: siliques linear, flattened, their valves nerveless: sds in 1 row in each cell, wingless: cotyledons thick, oft unequal, accumbent.  
 L. syst ed 1 (1735). = *Cardamine* fide IK.  
**D. CARDIOPHYLLA** P 3:122.  
**D. CUNEATA** P 3:123.  
**D. DOUGLASSII** P 3:124.  
**D. FULCHEERIMA** P 3:123.  
**D. RHOMBOIDEA** P 3:124.  
**D. ROTUNDIFOLIA** P 3:124.  
**D. SINUATA** P 3:124.  
**D. INTEGRIFOLIA** Nutt, T & G Fl 1:88. P 3:122.  
 B 1:31 as *Cardamine paucisecta* (= *C. integrifolia* fide A 1:111).  
**D. MACROCARPA** Nutt, T & G Fl 1:88. B 1:30. Ore.  
**D. TENELLA** Pursh, Fl 2:439. B 1:30. 2:430.  
**D. TENUIFOLIA** Hook Fl 1:46. B 1:30 as *tenella*.  
**D. CALIFORNICA** Nutt, T & G Fl 1:88. B 1:31 as *Cardamine paucisecta*. Wat 14:289. B 2:430. Par 4 t. Ab 173. P 3:122. A 1:111 as *Cardamine integrifolia*. Variety **FACHYSTIGMA** Wat 14:289. B 2:430.  
**DESMATODON** Bridel.  
**D. CALIFORNICUS** Lesq, Cal ac mem 1:10. B 2:369 as *Barbula atrovirens*.  
**D. CERNUUS** Bruch & Schimp. B 2:368, Eu, Nev, Brit Am.  
**D. GUEPINI** Bruch & Schimp. B 2:369 as *Barbula* G.  
**D. LATIFOLIUS** Bridel. B 2:368.  
 Variety **MUTICUS** Bridel. B 2:368.  
**D. NERVOSUS**.  
 Variety **EDETULUS** Lesq & Sull. B 2:369 as *Barbula atrovirens*.  
**D. BYSTILIUS** Bruch & Scripp. B 2:368.  
**DEWEYA** T & G Fl 1:641 (1840). = *Arracacia* fide IK.  
**D. ARGUTA** T & G Fl 1:641. B 1:257. Ab 283. A 1:271 as *Velaea arguta*.  
**D. HARTWEGII** G 7:342. B 1:257, 2:451.  
**D. KELLOGGII** G 7:343. B 1:257.  
**D. VESTITA** Wat 17:374. A 1:271 as *Velaea vestita*.  
**DIAPEDIUM** Koen steud nom ed 2, 468 (1811). = *Dicellaera* fide IK.  
**D. ATTENUATUM** M 1:5.  
**DICENTRA** Bernh in Linn 8:457, 468 (1833); 12:668 (1838). A 1:109d.  
**D. CHRYSANTHA** Walp rep 1:118. Par 168. B 1:24. Da 2. A 1:109d.  
**D. OCULLATA** Bernh in Linn 8:468. B 1:24.  
**D. FORMOSA** Walp rep 1:118. B 1:24, 2:429. Z 2:161. Par 248 t.  
**D. OCHEOLEUCA** E, bot gaz 6:223. Da 2. A 1:110 fdr.  
**D. PAUCIFLORA** Wat. B 2:429.  
**D. UNIFLORA** K 4:141. Cur 1:130. B 1:24. 2:429. Z 2:161.  
**DICHAETA** Nutt, Am Phil SC tr, sr 2, 7:383 (1841). = *Baeria* fide IK.  
**D. FREMONTII** G, Pl Fendl 102. B 1:377 as B. F.  
**D. TENELLA** Nutt lc. B 1:377 as B. *uliginosa* var. *tenella*.  
**D. ULIGINOSA** Nutt lc. B 1:377 as B. u.  
**DICHELLOSTEMMA** Kunth En Pl 1:469 (1843). = *Brodiaea* fide IK.  
**D. CALIFORNICA** wood, Phil ac pr 1868: 173. Cur 1:149 as B. *volubilis*. B 2:156 as *Stropholirion Californicum*.  
**D. CAPITATA** Bth ex wood lc. B 2:154 as B. *capitata*.  
**D. CONGESTUM** Kunth, En Pl 4:470. B 2:154 as B. *congesta*.  
**D. PULCHELLUM** M 1:132 based on Hookera *pulchella* Salisb.  
**DICHELLYMA** Myrin.  
**D. CYLINDERICARPUM** Austin, bot gaz 2:111. B 2:405, as *falcatum*.  
**D. FALCATUM** Myrin. B 2:405, Ore; 419.  
**D. SWARTZII** Lindb. B 2:405, as probably *Hypnum fuitans*.  
**D. UNCINATUM** Mitten. B 2:405, Wash. Genus **DICHONDRA** Forst.  
 Creeping per herbs with filiform sts: lvs reniform or round-cordate, entire:

ped sh, naked, 1-fld: cor deeply 5-cleft or-parted, lobes imbricated in bud: sta sh: ova 2-parted, forming 2 indehiscent or irregularly bursting utricles in fr: sty 2, distinct or united at base: sd 1: cotyledons linear, entire.

**D. ARGENTEA** Willd. Br 1:215 Rosa?  
**D. OCCIDENTALIS** House, M 1:130. A 1:130 fdr.

**DICHONDRA REPENS** Forst.  
Char Gen 39 t 20. B 2:170. Z 2:336, 336.  
Br. Z 1:114 Cat.

**DICLIPTERA** Juss in Ann mus Par 9: 267 (1807).

**D. BEACHIATA** Spreng, syst 1:186.  
Variety **ATTENUATA** G, Syn Fl 2 (1): 331. M 1:5 as *Diapedium attenuatum*.

**D. EESUPINATA** Juss lc, 268. B 1:589.  
**D. THLASEIOIDES** Nees in DC Prod 11: 474. B 1:589 as resupinata.

**DICOBIA** T & G, Emory rec 143 (1848).  
**D. BRANDEGEI** G 11:76. B 1:615. Br, Colo 230.

**D. CANESCENS** T & G, Emory rec 143. B 1:615. Da, Er 1:61 LA. CD (Or 2184). Ar. Ut.

**DICRANELLA LANGLOISII** Z 1:63.

**DICRANOWEISSIA**.

**D. CIBRHATA** Schimp. B 2:362 as *Weissia* c.

**D. CRISPULA** Schimp. B 2:362 as *Weissia* c.

**DICRANUM** Hedw. Moss.

**D. ALBICANS** B & S. B 2:364.

**D. ANGUSTIFOLIUM** Z 1:94.

**D. CONGESTUM** Bridel. B 2:364 as *fuscescens*.

**D. CANADENSE** Z 1:94.

**D. CRISPUM** Hedw. B 2:364.

**D. CONSOBRINUM** Z 1:63.

**D. FUSCESCENS** Turner. B 2:364.

**D. KETTEROMALLUM** Hedw. B 2:364. Eu, Cal.

**D. LATIFOLIUM** Hedw, Musc Frond 1: 89 t 3. B 2:368 as *Desmetodon latifolius*.

**D. MAJUS** Turner. B 2:365. Wash; Eu.

**D. PALUSTRE** La Pyl. B 2:365.

**D. POLYCARPUM** Ehrh. B 2:363. Eu.

**D. PURPUREUM** Hedw, spec 26 t 36. B 2:365 as *Ceratodon purpureus*.

**D. SCHREBERI** Swartz, B 2:364; Eu, Ore.

**D. SCOPARIUM** Hedw. B 2:364, Eu, Cal. Ore.

**D. STRICTUM** Schleich, B 2:364, Eu, Cal. Wash.

**D. SUBULFOLIUM** Z 1:94.

**D. SUBULATUM** Hedw. B 2:363, Eu, NH, Cal.

**D. SULCATUM** Z 1:94.

**D. VARIUM** Hedw. B 2:363, Eu, SF.

**D. VIRENS** Hedw. B 2:363, Eu, Wash, Cal.

Variety **SEBRATUM** B & S. B 2:363.

Variety **WAHLBERGII** B 2:363.

**DICTYOPHORA**.

**D. PHALLOIDEA** M 1:22.

**DIDYMODON** Hedw.

**D. CYLINDRICUS** B & S. B 2:366, Eu, India, Nev.

**D. PURPUREUS** Hook & Taylor, Musc Brit 65 t 20. B 2:365 as *Ceratodon purpureus*.

**D. RIGIDULUM** Hedw, Musc Frond 3: 8t 4. B 2:371 as *Barbula rigidula*.

**D. RUBELLUS** B & S. B 2:366, Eu, Africa, Nev, Cal, Atlantic states.

**D. HENDERSONI** Z 1:63.

**DIETERIA** Nutt, Am Phil sc tr, sr 2, 7:300 (1841). = *Aster* fide IK (*Machaer-anthera* fide Greene).

**D. ASTEROIDES** T, Emory rec 142. P 3:63 as M. A.

**D. CANESCENS** Nutt Am Phil sc tr 7: 300. P 3:59 as M. c. B 1:322 as A. c.

**D. CORONOPHOLIA** Nutt, lc 301. B 1: 322 as A. tanacetifolius.

**D. DIVARICATA** Nutt, lc. B 1:322 as A. canescens. P 3:61 as M. montana (?); 4:23 as M. d. in part.

**D. INCANA** T & G Fl 2:100. B 1:322 as A. 1. P 3:62 as M. 1.

**D. PULVEULENTA** Nutt lc. B 1:322 as A. canescens. P 3:61 as M. montana (?); 4: 23 as M. p.

**D. SESSILIFLORA** P 3:60 (error for *sessilifolia* Nutt) as M. s.

**D. SESSILIFOLIA** Nutt lc. B 1:322 as A. canescens.

**D. VISCOSA** Nutt lc. B 1:322 as A. canes cens. P 3:61 as M. montana (?); 4:22 as M. v.

**DIGITARIA** Helst ex Adans Fam 2:38, 550 (1763). = *Panicum* fide IK.

**D. SANGUINALIS** Scop Fl Carn ed 2, 1: 52. B 2:258 as P. s.

**DINEBRA** DC, cat Hort Monsp 104 (1813). = *Bouteloua* in part fide IK.

**D. ARISTIDOIDES** HBK Nov Gen et sp 1:171. B 2:291 as B. a.

**DIOSPYRUS VIRGINIANA** Linn.

**DIPLACHNE** Beauv, Agrost 80 t 16 (1812).

**D. PASCICULARIS** Beauv, Agrost 80 t 16 f 9. B 2:292 as *Leptochloa* f.

**DIPLACHNE IMBRICATA** Scribn.

*Leptochloa imbricata* Thurber.

S Ber (W. G. Wright); Texas; Baja.

Ft. Yuma, Cal (Or 2080).

Genus **DIPLACHNE** Nuttall.

Evergreen glutinous shrubs: lvs opp, revolute in bud: fls solitary in axils: ex tubular, 5-angled, 5-toothed: cor with

funnel-form tube and rather broad bilabiate limb: sta 4: stig of 2 flat lobes, closing together when irritated: cap

firm-coriaceous, linear-oblig, included in ex, with a woody enlargement at pointed

apex, opening down the upper suture only, or mainly, valves spreading out nearly

flat and bearing the placenta on their middle.

**D. ARACHNOIDEUS** Greene, Cal ac b 1: 210. 2:409 Cruz.

**D. AUBANTIUS** Don, in Sweet Hort Brit, ed 3, 516.

**D. CARDINALIS** Dougl, Rev. Hort, sr 4, 6:137 (1857). = *Mimulus* c, fide IK.

**DIPLACUS GLUTINOSUS** Nutt.

Nutt, ann nat hist, sr 1, 1:137. Par 144 t. Greene, Cal ac b 1:95.

Bush Monkey-flower. Low shrub, 2-4° hi; lvs oblong-lanceolate, revolute, den-

ticulate, glab and deep g above, pubes-

cent beneath with branching hairs; cor buff or salmon-color, 1½" lg or more,

the throat nar-funnel-form, lobes emarginate, with more or less irregular margin. Type locality: "vicinity of SF."

Variety **STELLATUS** P 2:155 based on stellatus IK.

Variety **LATIFOLIUS** P 2:155 based on latifolius Nutt.



**DIPLACUS GRANDIFLORUS** Greene.

Greenl. Rev. Hort. sr 4, 6: 403. Cal ac b 1:96, 156. A 1:16 fdr.

**DIPLACUS LATIFOLIUS** Nutt.

Nutt Ann nat hist sr 1, 1:138.

**D. LEPTANTHEUS** Nutt, lc.**DIPLACUS LINEARIS** Greene.

P 2:156. A 1:17 fdr.

**DIPLACUS LONGIFLORUS** Nutt.

Nutt, lc 139. P 2:156. A 1:17d.

**DIPLACUS PARVIFLORUS** Greene.

P 1:36; 2:157; Cal ac b 2:409 Cruz. A 1:16 fdr.

**DIPLACUS PUNICEUS** Nutt.

Nutt, lc 137. Greene, Cal ac b 1:96. Ab 364. A 1:17d.

**DIPLACUS STELLATUS** Kellogg.

K 2:18. Greene, Cal ac b 3:95. Cur 1: 115. P 1:206 Cedros.

**DIPLOPAPPUS** Cass in Dict sc nat 13: 308 (1819). = *Aster* fide IK.

**D. ALPINUS** Nutt, Am Phil sc tr ns, 7:304. P 3:245 as *Ionactis alpina*. = *A. scopulorum* fide IK.

**D. ARIOIDES** T & G Fl 2:182. P 3:148 as *Leucelene* e. (= *A. ericaefolius* fide IK).

**D. FILIFOLIUS** Hook, Fl 2:21. B 1:329 as *Erigeron filifolium*.

**D. INGANUS** Lindl, bot reg t 1693. Hook bot mag t 3382. B 1:322 as A. l.

**D. LEUCOPHYLLUS** Lindl in DC, Prod 5:278. B 1:321 as *Corethrogyne flaginifolia* var. *tomentella* G.

**D. LINARIIFOLIUS** Lindl, DC Prod 5: 277. P 3:245 as *Ionactis* l.

**D. OCCIDENTALIS** H & A, bot Beech 350. B 1:329 as *Erigeron foliosum*.

**DIPLOSTEEHIUM CANUM** G.

Br 1:211. Rosa (ictes *Hazardia cana*, serrata and detonsa Greene as synonyms). "Lvs vary in outline from sharply serrate and crenate to almost entire."

Type locality: "Guadalupe Island." F 1:29, as *Hazardia cana*.

**D. LINARIIFOLIUM** Nees, Ast 199 (1832). P 3:245 as *Ionactis* l.

**Genus DIPLOTAXIS** DC.

Erect an or per herbs: lvs pinnatifid or lobed: fls large, y, in terminal racemes: silique elongated linear flat or flattish, sh-beaked or beakless; valves mostly 1-nerved: sty slender: sds in 2 rows in each cell, marginless: cotyledons conduplicate.

**DIPLOTAXIS TENUIFOLIA** DC.

LC Syst 2:632. Ab 169.

Ann branched from the base, sparingly hispid or glab, the slender branches 3-6 dm hi, lfy only below; lvs oblanceolate, sinuate-lobed or sometimes pinnatifid, 5-10 cm lg, nar'd at base, com slender-petioled; fr'ng racemes lg, loose; fls 12-16 mm broad; pod about 3 cm lg, 2 mm wide, erect, flattish; fr'ng pedicel 18-30 mm lg. Eu. Sand Rocket.

**DIPSACEAE.**

Herbs with opp or verticillate exstipulate lvs: fls perfect, borne on an elongated or globose receptacle, bracted and involucre: cx-tube adnate to the ova, lvs limb cup-shaped or disk-shaped, or divided into spreading bristles: cor epigynous, the limb 2-5-lobed: sta 2-4, inserted on the tube of the cor and alt with its lobes; flk distinct: ova inferior, 1-celled; sty filiform; stig undivided,

terminal or lateral; ovule 1, pendulous: fr an ak, its apex crowned with the persistent ex-lobes.

**Genus DIPSACUS** Linnaeus.

Rough-hairy or prickly, tall erect bien or per herbs, with opp dentate or pinnatifid, usually large lvs, and b or lilac fls in dense terminal peduncled oblong hds: bracts of the inv and scales of the receptacle rigid or spiny-toothed: cx-limb cup-shaped, 4-toothed or 4-lobed: cor oblique or 2-lipped, 4-lobed: sta 4: stig oblique or lateral: ak free or adnate to the involucre.

**D. PULLONUM** L, sp pl 97. Eu. B 1:287. Z 1:57, 86. Da 8, Er 1:59 LA Co. Ab 383.

Parish, Z 1:57. Vasilis Z 1:86, Fuller's teal, "Freely dispersed about the bay of S. F." Par 392. A 1:179d.

**D. SYLVESTRIS** Mill Gard Dict ed 8, n 1. Eu. Z 2:333.

**DIERCA** L, Diss Chen 17 (1751).

**D. OCCIDENTALIS** G 8:631. B 2:62.

**D. PALUSTRIS** L, sp pl 358. (T, Pac Ry R 4:133 = *occidentalis* fide B 2:62.)

**DIERNA** Hasse, SCA B 1:26.

**D. HASSEI** Zahlbr, T cl b 2:744 (1901). Hasse, SCAB 1:27, Monica on bark of *Rhus laurinum*.

**D. BEDIUNTA** Zahlbr, Ann K K Natur Hist Hofmus 17:81 (1901), based on *Lecanora rediunta* Stiz (*Lecidea subulgens* Nyl). Hasse, SCAB 1:26. "Cat, on bark of *Heteromeles arbutifolia*, and since also on the mainland upon the Cal walnut and *Quercus agrifolia*."

**DISPOEUM** Salisb, Hort sc tr 1:331 (1812).

**D. HOOKERI** Nichols, Gard Dict 1:484. Par 382.

**D. MENZIESII** Nichols, Gard Dict 1:485. Par 383.

**DISSODON** Grev & Arn. Moss.

**D. HOENSECHUCHII** Grev & Arn. B 2: 386, Eu. Ore.

**DISTICHUM** B & S. Moss.

**D. CAPILLACEUM** B & S. B 2:374.

**D. INCLINATUM** B & S. B 2:374. Eu, Cal.

**Genus DITHYREA** Harvey.

Low branching ann, with stout sts and thickish ovate or orbicular subentire lvs, the whole herbage more or less cinerous-tomentose with stellate hairs: infl racemose, dense, oft branched: fls w'ish or p: sep ovate to oblg, erect or spreading, pubescent: pet conspicuous with spreading blade and slender claw: sta 6 with linear sagittate anth: pods strongly obcompressed, 2-celled: cells nearly orbicular, indehiscent with a thickened margin, separating at maturity from the persistent linear axis, 1-seeded: sds flat, marginless: cotyledons accumbent.

**D. CALIFORNICA** Harv, Lond J bot 4: 77 t 5 (1845). B 1:48 as B ls cutella C.

Variety **SCARITIMA** Ab 174.

**D. WISLIZENI** E. Wisliz Tour 95. = *Biscutella* W. fide IK.

**DOASSANSIA SINTENSII** M 1:19.**Genus DODECATHEON** Linnaeus.

L. Diss Chen 25 (1751). P 1:209-214.

Low per herbs, with entire or repand basal lvs, and rather large fls in involucre umbels terminating scapes: cx

- deeply 5-lobed, the lobes reflexed, slightly unequal, the tube sh, thickened at throat: sta 5, inserted on throat of cor; fl sh and flat, monadelphous, but at length separable above: sty filiform, exserted: fr a cap with columnar placenta surrounded at base by the now erect ex: sds num, minute, testa punctate.
- DODECATHEON ALPINUM** Greene. Greene, Er 3:39 (1895) based on Meadia variety alpinum G. Ha 101.
- DODECATHEON CLEVELANDI** Greene. Orcutt, W Am Scientist 7:128.
- Abrams, Fl LA 300.—"Frequent on dry mesas and grassy hillsides." P 1:213. Da 11. K Br, Z 1:17, 20 as Meadia var Hendersonii. Par 212. A 1: 104 fdr; 199 fdr. Z 1:17; 4:94 as syn. Variety **ALBA** Or, W 7:128.
- Variety **SPLENDENS** Or, W 7:128.
- D. CENATUM** P 2:74. K Br Z 4:94 as Meadia.
- D. CRUCIATUM** P 1:213 (2:75 as Hendersonii var. c). Z 4:94.
- D. CRUCIFERUM** K Br Z 1:18, 20 (read cruciatum fide Z 1:50), as Meadia var. Hendersonii.
- D. CUSICKII** P 2:73. K Br Z 4:94 as Meadia.
- D. DENTATUM** Hook Fl 2:119. K Br Z 1:19, 20 as Meadia var frigidum.
- DODECATHEON ELLIPTICUM** Nutt. Nutt ex Durand, Phil ac J, sr 2, 3:94. P 1:210, 211. K Br Z 1:18, 19, 20 as Meadia var. ellipticum.
- D. FRIGIDUM** C & S Linn 1:217. K Br, Z 1:18, 20 as Meadia var. frigidum.
- DODECATHEON HENDERSONII** Gray. Par 210. P 1:210, 211. Br 1:214 Rosa. A 1:199d. K Br Z 1:17, 19, 20 as Meadia var H.
- Variety **CRUCIATUM** P 2:75. Par 210 t.
- D. INTEGRIFOLIUM** Michx Fl 1:123.
- D. JAFFRAYI** B 1:467 = Jeffreyi (error).
- DODECATHEON JEFFREYI** Moore. Moore, Fl des Serres 16:94 t 1662. Greene Cal ac b 2:406 Cruz. P 1:210, 214. K Br Z 1:18, 19, 20 as Meadia var. J.
- Variety **REDOLENS** Hall bot gaz 31:392. Ha U 101.
- D. LAETIFLORUM** P 5:112.
- D. MEADIA** L, sp pl, ed 1, 144, Par 210 t. B 1:467. Z 1:17, 20:363. P 1:209.
- American cowslip. Pride of Ohio. Shooting star. The type of genus, as regarded by some authors, the only species, occurring from Pa to Cal.
- Variety **ALPINUM** B 1:467. K Br Z 1: 17-20 as var Jeffreyi. Ckel W 6:11.
- Variety **BREVIFOLIUM** B 1:467. K Br Z 1:18, 20 as var ellipticum.
- Variety **FRIGIDUM** Hook bot mag t 5871. Wat, bot King. B 1:467.
- Variety **HENDERSONII** G. Throuout Cal.
- Variety **JEFFREYI** G. Z 1:20. 2:164.
- Variety **LANCIPOLIUM** G. B 1:467. K Br, Z 1:20 as var Jeffreyi.
- Variety **LATLOBUM** G. B 1:467. KBr. Z 1:20 as var frigidum.
- Variety **MACROCARPUM** G. B 1:467. K Br. Z 1:20 as var Jeffreyi.
- D. FATULUM** P 1:211 K Br, Z 1:18, 20 as Meadia var ellipticum: 4:94 as syn.
- D. PAUCIFLORUM** P 2:72. K Br Z 4:94 as Meadia.
- D. SANCTARUM** P 5:113.
- DODONAEA** L, Gen, ed 1, 341 (1737).
- D. VISCOSA** Jacq. En Pl Carib 19. L. Mant 228. Baja (Br).
- DOELLINGERIA** Nees, Gen et sp Aster 177 (1832.)
- D. AMYGDALINA** Nees, lc 179. P 3:52.
- D. OENIFOLIA** Nees, lc 181. P 3:53 as infirma.
- D. INFIRMA** P 3:52.
- D. OBOVATA** Nees, lc, 182. P 3:53 as reticulata.
- D. RETICULATA** P 3:53.
- Genus **DONDIA** Adans.
- Fleshy an or per herbs, sometimes suffrutescent, with alt narly linear thick or nearly terete entire lvs and perfect or polygamous bracteolate fls solitary or clustered in the upper axils: ex 5-parted or -cleft, seg sometimes keeled or slightly winged in fr, enclosing the utricle: sta 5: sty com 2, sh: sd vertical or horizontal; embryo coiled into a flat spiral.
- D. CALIFORNICA** Heller, based on Suaeda C, Wat. Ab 131.
- Glab or pubescent; sts woody at base, about 2 dm hi; branches decumbent, 6-12 dm lg, woody below, bearing ascending or erect, very lfy branchlets 15-30 cm lg, lvs broadly linear, acute, 10-14 mm lg: fls 4 mm broad, 1-3 in axils; perianth deeply cleft; sd vertical, nearly 2 mm broad, faintly reticulated.
- D. DEPRESSA** Britton. Ab 131.
- An, branched from base and com above, 2-5 dm hi; branches decumbent or ascending, com very lfy; lvs narly linear, 2-3 cm lg, broadest at or near the base, the upper often narly lanceolate; sep acute, 1 or more of them strongly keeled in fr; sd about 1 mm broad, dull, minutely reticulated.
- D. MACQUINI** Nelson, based on Suaeda Torreyana Wat. Ab 131.
- Erect branched rather bushy, com about 6 dm hi, somewhat woody at base, branches lfy, smooth or somewhat tomentose; lvs linear subterete, narrow at base, 12-18 mm lg, acute, the floral similar; clusters mostly 7-fld; perianth deeply cleft, incurved or slightly cucullate; sd vertical, 1.5 mm broad, dark brown, finely tuberculate.
- D. MULTIFLORA** Heller, based on Suaeda suffrutescens Wat. Ab 131.
- Somewhat shrubby, 6-10 dm hi, with slender diffuse or divaricate lfy branches, more or less tomentose; lvs num, sm, 1 cm lg or less obl, nar at base, obtuse or acute; fls solitary or clustered, shyly lobed, sm; sd mostly vertical, less than 1 mm broad, obscurely tuberculate.
- DOUGLASIA** Lindl, Braude J sci (O 1827) 385.
- D. MONTANA** G 7:371. Parry, Wyo 12.
- Genus **DOWNINGIA** Torrey.
- T, Pac Ry R 4:116 (1856).
- D. FIGORNUTA** G. KBr, Z 1:374.
- D. CONCOLOE** Greene, Cal ac b 2:153. K Br, Z 1:374. 4: 93 as syn.
- D. CORYMBOSA** KBr. Z 2:375.
- D. ELEGANS** T, bot US expl expd 2: 375. B 1:444. Z 1:374.
- D. HUMILIS** Greene, Cal ac b 2:153. KBr Z 4:93 as syn.
- D. INSCISSA** P 2:80, "near Elmira, Cal." KBr, Z 1:374 et 4:93 as syn.



- D. MONTANA** KBr, Z 1:377 et 4:93 as syn.  
**D. ORNATISSIMA** P 2:80, "near Elmira, Cal." KBr, Z 1:374 et 4:93 as syn.  
**D. DOWNINGIA PULCHELLA** Torr.  
 Pac Ry R 4:116. B 1:444. Z 1:374.  
**D. FUSILLA** T, bot US expl expd 2:375. Z 1:374. Chlli.  
**D. TRICOLOR** P 2:79, "near Elmira, Cal." KBr, Z 1:374 et 4:93 as syn.

**Genus DRABA Linnaeus.**

- Dill ex L, syst ed 1 (1735). A 1:260d.  
**D. ALBERTINA** P 4:312.  
**D. ALGIDA** Adams ex DC syst 2:327. B 1:29 as alpina var algida Regel.  
**D. ALPINA** L, sp pl 642. Parry, Wyo 7. 14. B 1:29.  
 Variety **ALGIDA** Regel, Fl Ost. sib 1: 183. B 1:29.  
 Variety **DENSIFOLIA** Parry, Wyo 5.  
 Variety **GLACIALIS** Dickie, J Linn sc 11:33. B 1:29.  
**D. AMMOPHILA** M 1:145.  
**D. AUKEA** Vahl, Fl Dan t 1460. Hook. bot mag t 2934. B 2:430.  
 Variety **STYLOSA** G. Br. Colo. 233.  
**D. AUZEOLA** Wat. B 2:430.  
**D. BRACHYCARPA** Nutt. T & G Fl 1: 108. P 4:207 as Abdra b.  
**D. CAEOLINIANA** Walt, Fl Carol 174. P 4:204.  
 Variety **MICRANTHA** Z 2:227.  
**D. CORRUGATA** Wat. B 2:430. Ha 82. A 1:346d.  
**D. CRASSIFOLIA** R Grah, Edinb Phil J 1829:182. B 1:28.  
**DRABA CUNEIFOLIA** Nuttall.  
 T & G Fl 1:108. B 1:28. Da 2. A 1:77d, 260d. Ab 176. P 4:201.  
 Variety **BREVIPES** Wat. A 1:260.  
 Variety **INTEGRIFOLIA** Wat. 23:256. A 1:77 (fdr sub cuneifolia), 260d. Ab 176.  
 Variety **INTEGRIFOLIA** Wat. Parish, SCAB 2:81, Monica et Sber," a form of sterile solls." \*\*  
 Abrams, Fl LA 176.—Same range as the type and apparently more common.  
 Variety **PLATYCARPA** Wat. A 1:260d.  
 Variety **SONORAE** Parish. A 1:260d. Ab 176.  
 Variety **SONORAE** Parish, SCAB 2:81 based on D: Sonorae Greene, Cal ac b 2:59.  
 Abrams, Fl LA 176.—Same range as type, most common form with us.  
 Quintin (Palmer 611).  
 So Cal; Ar.  
 Draba Sonorae Greene, Cal ac b 2:59 (1885).  
**D. DIFLEXA** P 4:20.  
**D. DICTYOTA** P 4:313.  
**D. DOUGLASSII** G 7:328. B 1:29.  
**D. EURYCARPA** G 6:520. B 1:29. Parry. Wyo. 23.  
**D. GLACIALIS** Adams, mem sc nat Mosc 5:106. B 1:29 as alpina var glacialis.  
**D. GRANDIS** Langsd, DC Syst 2:355.—hyperborea fide Ik. P 3:253 as Neodrabia g.  
**D. HELLERIANA** P 4:17.  
**D. HELLERI** Small, Fl SEUS 479. M 1: 145 as ammophila, Tex.  
**D. HYPERBOREA** Desv. J bot 3:172. P 3:253.

- D. INTEGRIFOLIA** P 4:201.  
**D. JOHANNIS** Host FC Austr 2:240. (G. Am J sci 33:242 = crassifolia fide B 1:29.)  
**D. LEMMONI** Wat. B 2:430.  
**D. LUTEOLA** P 4:19.  
**D. MEMOROSA** L. sp pl 643. P 3:306 et 4:313.  
 Variety **LUTEA** Wat, bot King 22. B 1: 28 as stenoloba.  
**D. FLADRIZENSIS** Wulf in Jacq misc 1:147 t 17 f 1. Z 2:227.  
**D. NEOMEXICANA** P 4:19.  
**D. OLIGANTHA** P 4:313.  
**D. PETROPHILA** P 4:17.  
**D. PINETOCEUM** P 4:18.  
**D. TRAEALTA** P 3:306.  
**D. SPECTABILIS** P 4:19.  
**D. STENOLOBA** Ledeb, Fl Ross 1:154. B 1:28. P 4:313, 314.  
**D. SONORAE** Greene, Cal ac b 2:59. A 1: 260 as cuneifolia variety S.  
**DRABA UNILATERALIS** M. E. Jones.  
 Jones, Torr Cl b 9:124.  
 A 1:260 d. Greene, Cal ac b 1:72 as Heterodrabia u.  
 Valle de las Palmas, Baja (Or 1392).  
 Colusa Co, Cal.  
 Heterodrabia unilateralis Greene, Cal ac b 1:72.  
**D. STREPTOCARPA** G, Am J sci sr 2, 33:242. P 4:17.  
**D. STYLOSA** Turcz in sc nat Mosc b 27 (2):300. Ecuador. P 4:17-19.  
**D. VERNAL** L sp pl 642. P 4:205.—Eraphila vulgaris fide IK.  
**D. VIRIDIS** M 1:27.  
**DRAFERIA** T. Am. ac pr 7:401 (1868).  
**D. SYSTYLA** T. le. B 1:505.  
**DEIMOPHYLLUM** Nutt, sylv 1:85 (1842).  
**D. PAUCIFLORUM** Nutt, sylv 1:85 t 22. B 2:61 as Umbellularia Californica.  
**DROSERA** L, syst ed 1 (1735). P 3:81.  
**D. ANGELICA** Huds, Fl, ed 2, 1:135. Eu. B 1:213.  
**D. INTERMEDIA** Hayne, Schrad J bot 1800. 1:37. B 1:213.  
**D. LONGIFOLIA** L, sp pl 282. Eu. B 1: 213 in part as Intermedia.  
**D. ROTUNDIFOLIA** L, sp pl 282. B 1: 213. Eu. Asia. Fla. Cal. Arctic regions.  
**DRUDEOPHYTUM**  
**D. PARISHII** C & R Mon 82. A 1:271 as Velaia P. Ab 284.  
**DRYMARIA** Willd ex Roem & Schult, syst 5: xxxi (1819).  
**D. ARENARIODES** Willd, lc, 406. Z 2:68.  
**D. CARINATA** Z 2:70.  
**D. CRASSIFOLIA** Bth, bot Sulph 16. Z 2:68, 69.  
**D. CORDIFOLIA** Z 2:69.  
**D. DEBILIS** Z 2:68.  
**D. DEPRESSA** Gifts 1:153. NM.  
**D. FENDLERI** Wat 17:328, NM. Z 2:69.  
**D. GLANDULOSA** Bart, Presl Rel Haenk 2:9. Z 2:69.  
**D. HOLOSTEOIDES** Bth, bot Sulph 16. Z 2:68, 69.  
**D. POLYCARPIOIDES** G, Pl Fendl 12. Z 2:68.  
**D. POLYSTACHYA** Z 2:69.  
**D. VISCOSA** Wat 22:469.  
 "Ann. prostrate, diffusely branched; sts and branches glab or nearly so: lvs

linear-spatulate, somewhat fascicled, 6" lg or mostly much less, glandular pubescent or glabrate: fls nearly sessile in loose corymbs: sep viscid-pubescent, scarcely a line lg; pet included, bind: cap oval, few-seeded, equally the sep."—Wat 22:469. Near Quintin.

**DRYAS** L. Gen. ed. 1, 148 (1737).

**D. ANEMONOIDES** Pall Reise 3: app 733. P 4:49 as *Sieversia pentapetala*.

**D. PENTAPETALA** L. Amoen 2:353, et sp pl 1:501. P 4: 49 as *Sieversia* p.

Genus **DRYMOCALLIS** Tourn.

Fourr in Ann Linn sc Lyon ns, 16:371 (1863). A 1:317d. = *Potentilla* fide 1k.

**DRYMOCALLIS GLANDULOSA** Rydb. A 1:317d. Ab 200.

Abrams, Fl LA 200.—Frequent in the chaparral belt in all our mts. Ours not typical, having usually smaller fls and less acute sep. Mr-Jl.

*Potentilla glandulosa* Lindl, bot reg 19 t 1583 (1833).

Type locality: "California."

Greene, Erythea 1:5. Pacific coast.

Davidson, Erythea 2:30. Cat I.

Variety **MONTICOLA** Rydb.

A 1:318d. Ab 200.

Abrams, Fl LA 200.—Frequent in the pine belt of our mts. My-Ag.

Rydb, mon NA Pot 199 (1898).

*Potentilla glandulosa* var. *Nevadensis* Watson.

Hall, U 87.

Genus **DRYOPTERIS** Adams.

**DRYOPTERIS RIGIDA-ARGUTA** Und.

California to Alaska.

Genus **DUDLEYA** Britton & Rose.

A 1:90 fdr.

**DUDLEYA ABRAMSI** Rose.

A 1:49 fdr.

**DUDLEYA ACUMINATA** Rose.

Calmali, Baja (Or). Cedros Island (Br)?

**DUDLEYA ALBIFLORA** Rose.

Magdalena bay, Lower California (T. S. Brandegee).

**DUDLEYA ALOIDES** Rose.

A 1:49 fdr.

**DUDLEYA ANTHONYI** Rose.

San Martin Island, Lower California (A. W. Anthony).

**DUDLEYA BERNARDINA** Britton.

A 1:52 fdr.

**DUDLEYA BRANDEGEI** Rose.

"Probably native of Lower California" (Mrs. T. S. Brandegee).

**DUDLEYA BRAUNTONI** Rose.

A 1:53 fdr. Ab 187.

**DUDLEYA BREVIPEDES** Rose.

Calmali, Baja (Or).

**DUDLEYA BRYCEAE** Britton.

A 1:51 fdr.

**DUDLEYA CANDELABRUM** Rose.

A 1:51 fdr.

**DUDLEYA CANDIDA** Britton.

A 1:51 fdr.

**DUDLEYA CONGESTA** Britton.

A 1:53 fdr.

**DUDLEYA CULTRATA** Rose.

A 1:50 fdr.

**DUDLEYA PARISHII** Rose.

A 1:52 fdr.

**DUDLEYA PAUCIFLORA** Rose.

San Pedro Martin mt, Baja (T. S. Brandegee).

**DUDLEYA PULVERULENTA**.

A 1:90 d. Par 148. Ab 186.

?*Cotyledon pulverulenta* Baker in

Saund Refug Bot 1:t 66 (1869).

?*Echeveria argentea* Lem, Ill Hort 10:

78 (1863).

**DUDLEYA PUMILA** Rose.

A 1:50 fdr.

**DUDLEYA RIGIDA** Rose.

Lower California (J. E. McClelland).

**DUDLEYA RIGIDIFLORA** Rose.

Plaza Maria, Lower California (A. W. Anthony).

**DUDLEYA ROBUSTA** Britton.

A 1:52 fdr.

**DUDLEYA RUBENS** B & R.

*Cotyledon rubens*, Br, Cal ac pr sr 2,

2:155 (1889). "Cliffs near San Esteban,"

Baja.

**DUDLEYA RUSBYI** Britton & Rose.

*Cotyledon rusbyi* Greene, Torr cl b 10:

125 (1883).

San Francisco mountains, Arizona.

**D. SHELDONI** Par 146 t.

**DUDLEYA TENUIS** Rose.

A 1:50 fdr.

**DUDLEYA XANTI** Rose.

Vicinity of San Lucas, Baja (Xantus).

**DUDLEYA DELICATA** Rose.

A 1:53 fdr.

**DUDLEYA ELONGATA** Rose.

A 1:53 fdr. Ab 188.

**DUDLEYA GRANDIFLORA** Rose.

A 1:49 fdr.

**DUDLEYA GREENEI** Rose.

A 1:50 fdr.

**DUDLEYA HALLII** Rose.

A 1:50 fdr.

**DUDLEYA INGENS** Rose.

A 1:51 fdr.

**DUDLEYA LANCEOLATA**.

*Cotyledon lanceolata* Benth & Hook,

Brewer & Watson, Bot Cal 1:211 (1876).

A 1:90d. Par 146.

**DUDLEYA LINEARIS** Britton & Rose.

*Cotyledon linearis* Greene, Pittonia 1:

285 (1889).

San Benito Island, Baja.

**DUDLEYA LURIDA** Rose.

A 1:52 fdr. Ab 188.

**DUDLEYA MINOR** Rose.

A 1:51 fdr. Ab 187.

**DUDLEYA NUBIGENA** B & R.

*Cotyledon nubigena* Br Cal ac pr sr 2,

3:136 (1891). Sierra de la Laguna, Baja.

**DUDLEYA OVATIFOLIA** Britton.

A 1:52 fdr. Ab 187.

**DULICHIMUM** Pers, syn 1:65 (1805).

**D. SPATHACEUM** Rich, ex Per lc. B

2:213.

**DURAVIA** Gifts 1:23, based on sp of

*Polygonum* (section *Duravia* Wat).

**D. BIDWELLIAE** Gifts 1:23 based on

P: B (Wat 14:294).

**D. BOLANDERI** Gifts 1:23 based on P:

B (G 8:400).

**D. CALIFORNICA** Gifts 1:23 based on

P: c (Meisn in DC 14:100).

**D. GREENEI** Gifts 1:23 based on P: G

(Wat 14:295).

**DYSMICODON** Nutt. Am phil sc tr, sr 2,

8:255 (1843). = *Specularia* fide 1k.

**D. CALIFORNICUM** Nutt lc, 256. B 1:

446 as *S. biflora*.

**D. OVATUM** Nutt, lc B 1:446 as *S.*

*biflora*.



Genus **DYSODIA** Cav.

**DYSODIA** Cav in Anal Clenc nat 6:334 (1802).

**D. ANTHEMIDIFOLIA** Bth, bot Sulph 29. P 1:291, San Bartolome bay, Baja.

**D. CHRYSANTHEMOIDES** Lag. Gen et sp 29. B 1:397.

**D. COOPERI** G 9:201. B 1:388. CD. Mo-have.

**D. POROPHYLLOIDES** G. Am ac mem, NS. 5:322. B 1:397. Ar. Cal. Calmalli (Br).

**D. SPECIOSA** G 5:163. B 1:397.

**EATONIA** Raf, J Phys 89:104 (1819).

**E. ANNUA** Skds. A 1:159 fdr.

**E. OESTUSATA** G, B 2:302.

San Bernardino, Cal. (Parish).

**E. PURPURASCENS** Raf lc.

**EBUROPHYTON**

**E. AUSTINAE** M 1:49.

**ECHEVERIA** DC 3:401 (1828). = Cotyledon fide lk.

**E. ARGENTEA** Lem, Ill. Hort. 10: misc 78 (1863). A 1:90 as Dudleya pulverulenta.

**E. FARINOSA** Lindl. J hort sc 4:292. B 1:212 as C. f.

**E. LANCEOLATA** Nutt. T & G Fl 1:561. A 1:90 fdr as Dudleya l. T. Pac Ry R 4: 89 in part = C. farinosa fide lk.

**E. LAXA** Lindl. J hort sc 4:292. B 1:212 as C. l. = C. caespitosa fide lk.

**E. PULVERULENTA** Nutt. T & G Fl 1: 560. A 1:90 fdr as Dudleya p.

**ECHIDIOCAEYA** G ex B & H Gen 2: 854 (1876).

**E. ARIZONICA** G 11:89 Ar. B 1:519. P 1:21 as Plagiobothrys Pringlei.

**ECHINAIUS** C Koch, in Linnaea 24:403 (1851). = Cnicus fide lk.

**E. CARLINOIDES** Cass, DC Hort Genev t 22. B 1:421 as C. s. (Eu; Sib.)

**E. KUTANS** Cass lc B 1:421 as C. Carlinoides.

**ECHINACEA** Moench. Meth 591 (1794).

**E. ANGUSTIFOLIA** DC 5:554. M 1:5 as Branneria a.

**E. TENNESSEENSIS** M 1:149 error for Branneria t (Beadle bot gaz 25:359 (1898) = B. angustifolia.

**ECHINOCHLOA** Beauv, Agrost 53 t 11 (1812). = Panicum fide lk.

**E. CRUS-GALLI** Beauv lc. B 2:260 as P. C.

**ECHINOCYSTIS** T & G Fl 1:542 (1840. P 1:1, 143. Marah K.)

**E. FABACEA** Naudin, Ann Sci nat, sr 4, 5:154. Par 28 t. P 1:3. Z 1:137.

Br 1:210. The plants of both Cruz and Rosa seem to be this species rather than E. macrocarpa. They mature either 4 or 8 large sds."

Synonymy: Megarrhiza Californica T, Pac Ry R, Wat, B 1:241.

**E. GILENSIS** Greene, Cal ac b 1:189.

**E. GUADALUPENSIS** Cogniaux, DC mon phan 3:819. Greene, Cal ac b 2:398 Cruz. P 1:3, 88 Mig.

Synonymy: Megarrhiza Guadalupensis Wat. B 1:241.

**E. MACROCARPA** Greene, Cal ac b 1: 188; 2:398 Cruz (vide E fabacea). Par 30. P 1:203 Cedros.

**E. MARA** Cogn. DC mon phan 3:817.

**E. MURICATA** K 1:57. P 1:3. Cur 1:138 as Megarrhiza muricata Wat.

Synonymy: E. Watsoni Cogn. DC mon phan 3:819, fide P 1:3.

**E. OREGANA** Cogn. Diag Cucurb nouv 2:87, 97. P 1:3.

Synonymy: Megarrhiza oregana T, Pac Ry R; B 1:241.

**E. WATSONI** Cogn—vide muricata.

**ECHINODORUS** Rich. mem mns Par 1:365 (1815).

Per or ann herbs with lg-petioled, elliptic, ovate or lanceolate, oft cordate or sagittate lvs, 3-9-ribbed, mostly nunc-tate with dots or lined; scapes oft lg'r than the lvs; infl racemose or paniculate; fls perfect, in whorls, each whorl with 3 outer bracts and num inner bracteoles; pet w: recepticle large convex or glob-ose; sta 12-30; ova num, sty obliquely apical, persistent; stig simple; ak more or less compressed, ribbed and beaked, forming spinose hds. Bur-head.

**E. CORDIFOLIUS** Griseb, Goett Abh 7:257 (1857). Ab 16.—rostratus fide lk.

Lvs com broadly ovate, obtuse, cordate at base, 12-16 cm lg and wide, sometimes lanceolate and sm'er; petioles angular, striate, 5-15 cm lg; scapes 1 or more, erect, 10-30 cm hi; fls 3-6 in each whorl, on pedicels 6-12 mm lg; bracts linear-lanceolate, acuminate, dilated at base, inner perianth seg sh'r than the outer, 4-6 mm lg; sta com 12; sty exceeding the ova in length; fr'ing hds bur-like, 4-6 mm in diam; ak obovate or falcate, 6-3-ribbed; beak apical, oblique, 1.5 mm lg.

Abrams, Fl LA 16.—"Occasional along streams and banks of ponds. My-Jl."

Echinodorus rostratus E.

SD! Baja mts l Comodu, Baja (Br).

**ECHINODORUS ROSTRATUS** Engelm.

G man bot ed 1, 460 (1848); ed 2, 438. Ab 17 as cordifolius.

**ECHINOPANAX** Decne & Planch in rev hort (1854) 105.—Fatsia fide lk.

**E. HORRIDUS** D & P, lc. B 1:273 as F. h.

**ECHINOSPERMUM** Sw ex Lehm, As-perif 113 (1818).

**E. DEFLEXUM** Lehm, lc 120. B 2:469. Z 2:232. Parry Wyo, 18. Eu. Sib.

Variety **FLORIBUNDUM** Wat, B 1:530.

**E. DIFFUSUM** Lehm, Pugil 2:23. B 1: 530. 2:469. Z 2:165.

**E. FLORIBUNDUM** Lehm Pugil 2:24. B 1:530. 2:469.

**E. FREMONTII** T & G, Pac Ry R 12:46. P 4:96.—redowskii fide lk.

**E. GREENEI** G 12:163. B 2:469. A 1:100 d. P. 1:15 as Allocarya Echinoglochm.

**E. LAFFULA** Lehm, Asperif 121. Eu. (H & A bot Beech=Redowskii fide B 1: 530).

**E. LEIOCARPUM** F & M, Sem Hort Pet-rop 1835: 36. B 1:523 as Eritrichium l.

P 1:117 as Cryptanthus leiocarpa.

**E. NERVOSUM** K 2:146. Cur 1:143 cites Californicum G as a synonym.

**E. FATULUM** Lehm, Hook Fl 2:84. B 1:530 as Redowski.

**E. REDOWSKI** Lehm, Asperif 127. P 4: 97. B 1:529. 2:469.

Variety **CUPULATUM** G. B 1:530.

Variety **STRICTUM** Wat bot King 246. B 1:530 as variety cupulatum G.

**E. STRICTUM** Ledeb, Fl Abt 1:200, Sib. Nees, in Neu-Wied, Trav 2:443=Redo-

wski var. *cupulatum* fide B 1:530.

**E. TEXANUM** Scheele in Linnaea 25:260 P 4:94. = Redowski fide 1k.

**ECHITES** P Br. Hist Jamaic 181 (1756).  
**E. MACROSIPHON** T, bot Mex bound 158 t 43. = Macrosiphon Berlandieri fide 1k. M 1:2 as Macrosiphonia macrosiphon.

**ECLIPTA** L, Mant 2:157 (1771).

**E. ALBA** Hassk, Pf Jav Rar 528; Mig Fl Ned Ind. 2:65. = Erecta fide 1k. near Ft Yuma, Cal. (Or 2093).

**EDOSMIA** Nutt, T & G Fl 1:612 (1840).

**E. GAIRDNERI** Nutt lc. P 1:274 as Aetnaea Gairdneri. B 1:54 as Carum Gairdneri.

**E. OREGANA** Nutt hb. P 1:274 as Aetnaea O.

**EGLETES** Cass, sc Philom b 1817:153.

**E. CALIFORNICUS** K 1:57. Cur 1:140 as Eriophyllum caespitosum.

**ELATERIUM** Jacq. Stirp Am 241 (1763).

**E. BIGELOVII** Wat 12:252. B 2:449. = Echinocystis B? (fide 1k).

**E. MINIMUM** Wat 12:252. B 2:449. = Echinocystis m fide 1k.

### ELATINACEAE.

Low herbs with opp or verticillate stipulate entire or serrate lvs, and sm axillary or fascicled regular perfect fls: sep 2-5, imbricated: pet equal in number, hypogynous: sta equal in number or twice as many: ova 2-5-celled: sty 2-5; ovules many, anatropous: cap with septical dehiscence; placentae central: sd-coat crustaceous, rugose or ribbed.

#### Genus ELATINE Linnaeus.

L. Gen. ed 1, 118 (1737).

Water-wort: glab dwarfs, somewhat succulent, growing in water or in wet places, rooting at nodes: lvs entire: fls 2-4-merous: sep sub-membranous, obtuse: pet w or w'ish: cap globose, thin membranous, 2-4-celled, several or many seeded: sds striately sculptured.

**ELATINE AMERICANA** Arn.  
Arn in Edinb J nat geog sc 1:431. B 1:80. 2:436. A 1:27d.

**ELATINE BRACHYSPERMA** Gray.  
G 13:361, 363. Z 2:343. B 2:436. Ab 251. A 1:27d.

**ELATINE CALIFORNICA** A. Gray.  
G 13:364. B 2:436. Da 3. A 1:27d.

**E. TEXANA** T & G Fl 1:678. B 1:80 as Bergia T.

#### Genus ELEOCHARIS R. Brown

Ann or per herbs, with simple, com. terete sts, and lvs reduced to mere sheaths or the lower rarely bearing a blade: Spkts solitary, terminal, erect, several many-fld, not subtended by an inv: scales concave, spirally imbricated: perianth of 1-12 com retrorsely barbed bristles, or sometimes 0: sta 2-3: sty 2-cleft and ak lenticular or biconvex, or 3-cleft and ak more or less distinctly 3-angled: base of the sty persistent on the summit of the ak, forming a terminal tubercle. Spike-rush.

**ELEOCHARIS ACICULARIS** R. Br.  
R Br, Prod 224. Ab 70. Ha 65. Da 18. B 2:221. Eu. Asia. Brit Columbia to Mex.

Rt-stock very slender, creeping; sts 1-8' hi, very slender; spkt 1-3' lg, few-

fld; bractlets ovate-oblong, 1½" lg, r'ish-brown with broad g midvein: sty deeply 3-cleft: ak ½" lg, obscurely triangular, ribbed on the sides; tubercle broad, sh, blunt.

**ELEOCHARIS ARENICOLA** Torrey.

T, ex E & G, Bost J nat hist 5:237. Da 18. B 2:222.

Near Vulcan de las Tres Virgenes, Baja!

= Eleocharis Montana.

**E. BOLANDERI** G 7:392. B 2:222.

**ELEOCHARIS CAPITATA** R. Br.

**E. DOMBEYANA** Kunth, En Pl 2:145. Peru. (Boeck, Linnaea 36:450, as to Drummond's plant = arenicola fide B 2:222).

**E. ENGELMANNI** Steud, Syn pl Cyp 79. = ovata fide IK (Halls Texas n 696 = obtusa fide B 2:222).

**E. MONTANA** Roem & Schult, Syst 2:153. Bth 27 (B 2:222 as truncata). Ab 72.

Eleocharis arenicola Torrey.

Per; sts slender, sulcate, 15-45 cm hi, erect; basal sheaths brown; spike oblg or sometimes ovate, 4-10 mm lg, rounded at apex; scales num, closely imbricated, ovate, very obtuse, brown with g midvein, scarious margined; bristles 4-6, about =ing ak; sty 3-cleft; ak obtusely 3-angled, oblong-obovate, about 1 mm lg, g'ish brown, smooth; tubercle broad at base, slightly constricted, deltoid, acute.

**E. OBTUSA** Schult, Mont 2:89. = ovata fide 1k. B 2:222.

**E. OLIVACEA** T, N Y ann Lyc 3:300. B 2:222. Ore.

**E. OVATA** R Br, Prod 224. B 2:222. Eu.

**ELEOCHARIS PALUSTRIS** R. Br.  
Prod 224. Eu. B 2:221. Da 18. Ab 70. Ha 65.

Common spike-rush. Per: ra-stock stout, creeping, stoloniferous; sts ½-2' hi, slender, mostly terete, sheathed at base, lf-less; sheaths sub-truncate; spikelet many-fld, 6-12" lg, oblg-lanceolate to linear, brown with broad w'ish margin and g'ish keel; sty 2-cleft; ak planoconvex, rounded but not angled on back, 1" lg including tubercle, which is constricted at point of junction. Baja! SF. creeping spike-rush.

**E. FAUCIFLORA** B 2:221 based on Scirpus p, Lightf, Reicheub Ic Fl Germ 8 t 299.

**E. FYGMAEA** T, N Y Lyc ann 3:313. = Scirpus nanus fide 1k. B 2:221.

**E. ROSTELLATA** T, Fl N Y 2:347. B 2:222. Da 18. Ab 71, LA, SDer. Baja!

Per; sts rather slender, compressed, strongly sulcate, 3-8 dm hi; often reclining and rting at apex; basal sheaths light colored, truncate; spike oblong, 6-10 mm lg; scales straw-colored, or pale brown, ovate, obtuse, carinate, rather firm, about 4 mm lg; bristles 6, exceeding ak; sty 3-cleft; ak obovate, obtusely 3-angled, about 2 mm lg; tubercle not constricted at base, pyramidal, about 1 mm lg.

Eleocharis rostellata occidentalis Wat. Variety **OCCIDENTALIS** Wat, B 2:222. "Nutlet nar'er, oblg-obovate: bristles mostly sh'er." Ab 71 as typical.



**E. TRUNCATA** Schlecht, bot zeit 7:118. =Dombeyana fide Baekeler (B 2:222).  
**ELEUSINE INDICA** Gaertn, Fr et Sem 1:8. Parish, SCAB 8:7. LA.  
**ELLISIA** Nutt, T & G Fl 1:125 (1838).  
 =Oligomeris fide lk.  
**E. RUDEBALIS** Nutt Lc. B 1:54 as O. subulata.

Genus **ELLISIA** Linnaeus.

**ELLISIA CHRYSANTHEMIFOLIA** Bth Linn sc tr 17:274. Ab 321. Da 11. B 1:505. Br 1:214 Rosa. Par 40. Vide Eucrypta c.

Contra Costa Co to Quintin; Guad; Cruz; Rosa.

**ELLISIA MEMBRANACEA** Benth. Linn sc tr 17:274. Cov 157, Funeral mts. B 1:505.

Sts succulent, light g, smooth except for some stiff bristly hairs that sometimes help support the weak sts: lvs pinnately divided into 3-9 obtuse, linear divisions with margined petioles; shady damp places.

Macrocalyx membranaceus Kuntze, Rev. Gen Pl 2:434 (1891).

Type locality: Californian.

SF to Quintin.

**E. TORREYI** G 20:302.

**ELODEA** Michx, Fl 1:20 (1803). Juss Gen 255 in obs (1789); Vent Tabl 3:144 (1799)=Hypericum fide lk. Jack in Malay misc 2: n 7, 21 (1882)=Cratoxylon fide lk.

**E. CANADENSIS** Michx Fl 1:20. B 2:129 as Anacharis c.

**ELEPHANTELLA ATTOLENS** M 1:4.

**ELYTROSPERMUM** Steud, Nom ed 2, 1:552 (1840).=Elytrospermum Mey.

**ELYTROSPERMUM** C. A. Meyer, mem sav Etr Petersb 1:200 t 2 (1830).=Scirpus fide lk.

**E. CALIFORNICUM** Mey, lc. B 2:218 as S. tatora (=riparius fide lk).

Genus **EMMENANTHE** Benth.

**EMMENANTHE** Bth. Linn sc tr 17:281 (1835).

Ann with habit of Phacelia and differing from that genus only by its y or cream-colored persistent cor, destitute of appendages.

**E. GLABERIMA** T ex Wat, bot King 257 B 1:514.

**E. GLANDULIFERA** T, lc. B 1:514. Wat, bot King 257. Nev.

**E. LUTEA** G 10:329. B 1:514. Nev. Idaho.

**E. PAEVIFFLORA** G, Pac Ry R 6:84 t 15. B 1:514 Ore.

**EMMENANTHE PENDULIFLORA** Bth. Linn sc tr 17:281. B 1:515. Ab 326. Da 12, Er 1:12. Per 134 t Greene. Cal ac b 2: 407 Cruz. Ar! Baja! A 1:78d. Guad.

**E. FUSILLA** G 11:87. B 1:515 Nev.

**EMPETRUM** L, syst ed 1 (1735).

**E. NIGRUM** L, sp pl 1022. Eu. Asia. P 3:79.

**EMPLECTOCLADUS** T, Smith Cont 6: 10 t 5 (1854).

**E. FASCICULATUS** T, lc. B 1:168 as Prunus f.

**ENCALYPTA** Schreb.

**E. CILIATA** Hedw. B 2:386. Eu. N Y. Ore. Colo. Cal.

**E. RHABDOCARPA** Schwaegr. B 2:386. Eu. Colo. Wash. Nev. Arctic Am.

**E. VULGARIS** Hedw. B 2:385. Nev. Ut. Cal. Colo. Eu.

**ENCELIA** Adans, Fam 2:128 (1763). A 1:185 d.

**E. CALIFORNICA** Nutt, Am phil sc tr 7:357. Par 132. Greene. Cal ac b 2:402 Cruz. Da 9. Ab 415. B 1:351. A 1:185d.

**E. CONSPERSA** Bth, bot Suph 26. P 1: 265. San Benito Isl; 268 Cedros; 290, San Bartolome bay, Baja. B 1:351 (? as California).

**ENCELIA ERIOCEPHALA** A. Gray.

G 8:657. Cov 131. B 1:351. CD Cape San Lucas, Baja.

CD (Parish 228); Cape San Lucas.

**ENCELIA FARINOSA** A. Gray.

G, Emory R 143. Cov 131. B 1:351. 2:456. Da 9. Ab 416. S D Co!

"Incienco," 5 ft high, San Gregorio, Baja (Br). SD Co!

Synonymy: E. radians Greene, fide Br Z 1:83.

**ENCELIA FRUTESCENS** A. Gray.

G 8:657 (1873). Cov 131, Panamint and Inyo mts. Ut. SD Co! Z 2:248. B 1:352.

Type locality: "Agua Caliente, on the Gila," Ar.

Utah; Arizona; SD Co!

Synonymy: Simsia frutescens G.

**E. NIVEA** Bth, bot Sulph. 27. B 1:354 as Viguiera n.

**E. NUTANS** Z 2:230.

**E. RADIAN** Cal ac pr sr 2, 2:176.=farinosa fide Br, Z 1:83.

**E. STENOPETALA** Greene, Torr cl b 10: 41. P 1:204 Cedros.

**ENCELIA VISCIDA** A. Gray.

G 11:78. S D mts! B 1:616.

**ENDOTHEIA**

**E. LONGIROSTRIS** M 1:14.

**ENTOSTHODON** Schwaegr. Moss.

**E. BOLANDERI** Lesq. B 2:388. SF.

**E. TEMPLETONI** Schwaegr. B 2:388. Eu. Cal.

**ENTYLOMA ELLISII** Halsted. Z 1:94, on spinach.

**EPIMEDIDIUM** L, syst ed 1 (1735).

**E. HEXANDRUM** Hook Fl 1:30 t 13. B 1: 15 as Vancouveria hexandra.

Genus **EPIPACTIS** Haller.

Adans, Fam 2:70 (1763).

St lfy from creeping rdstocks: Fls in racemes with foliaceous bracts; sep and pet nearly equal, spreading; lip strongly constricted at middle, lower portion deeply concave, upper portion dilated: Anth 2-celled, sessile behind the broad truncate stig, on a slender jointed base; pollen-masses become attached to gland capping the sm rounded beak of stig: Ovaries reflexed at maturity.

**E. AMERICANA** Lindl, in ann nat hist 4:385. B 2:137 as gigantea.

**E. GIGANTEA** Dougl ex Hook Fl 2:202 t 202. Ha 70. B 2:137. Da 11. Z 2:4, 166, 374. Par 394 t. Stream orchis.=Royleana fide lk. Wat, bot King 341.

**E. ROYLEANA** Lindl, in Royle, Ill bot Himal 368.

Genus **EPHEDRA** Tournefort.

Tourn, ex. L. Gen ed 1, 312 (1737).

**E. ANTISYPHILITICA** Berland, ex CA Mey, mon Eph 101. B 2:109, (of Wat, bot King 328 t 39 as Nevadaensis).

**E. CALIFORNICA** Wat 14:300. B 2:109. Da 17. A 1:366d.

**EPHEDRA NEVADENSIS** S. Watson. Wat 14:299. B2:108. Nev. Mohave. Mex.

**EPHEDRA OXYCARPA** Engelm.

**E. TORREYANA** Wat 14:299. B 2:109.

**EPHEDRA TRIFURCA** Torr.

Emory R 152. (Parry, bot obs. Ut 351=

Torreya fide lk.) B 2:109. Ut.

**EPHELIS MEXICANA** M 1:23.

**EPHEMERUS** Hampe. Moss.

**E. SERRATUM** Hampe. B 2:358. Eu. Atlantic states, Cal.

**EPICOSTOES** Raf Atl J 144 (1832). = Neillia fide lk.

**E. MONTANUS** Raf lc. = N. monogyna fide P 2:29. = N. Torreyi fide IK.

**EPILOBIUM** Dill ex L, syst ed (1735).

Erect herbs; ann, per by creeping r-ticks, or propagating in autumn by off-sets: lvs opp or alt: fls p, rose-color or w: pet 4, oft emarginate or bifid: sta 8, the 4 alt sh'er: stig obl or 4-lobed: ova lg and nar, 4-celled: cap 4-valved: sds num, the summit bearing a tuft of lg hairs (coma). Willow-herb.

**E. ADENOCAULON** Haussk, in Oestr bot zeit 29:119.

Variety **OCCIDENTALE** Trelease, Mo bot gard r 2:95:—"Remotely lfy, especially the mostly strict very glandular branches; lvs more triangular-lanceolate, 50 mm lg on main st, erect, prominently denticulate, very sh-stalked, those of infl sm and acute at both ends." McClatchie, Er 2:123 Cat. Cov 102 Mono Co. Cal. Mont? Ut. Ar. Da 6.

Type locality: "Vancouver Island and Brit Columbia to central Cal and Nev?"

Variety? **PERPLEXANS** Trelease, lc, 96t 25:—"Slenderer, sub-simple or with few ascending remotely lfy branches, less glandular, the infl sometimes canescent with incurved hairs; lvs scarcely 50 mm lg, divergent, lanceolate, rather obtuse and sparingly undulate-serrulate, thin and light g, the upper acutely tapering to slender sometimes elongated petioles. Yellowstone Park to Ore. Colo. NM, and Cal." Ar. Nev. Ha 96.

**E. ALPINUM** L, sp pl 348. B 1:219.

**E. ANGUSTIFOLIUM** L, sp pl 347, Eu. Par 250. Cov 102. Ckl W 5:11. Haussk, mon 37. Trelease, Mo bot gard r 2:80 as spicatum. Z 2:162.

**E. EREVISTYLUM** Barb. B 1:220. = glandulosum fide lk. Trelease, Mo bot gard r 2:100. Wash. Cal.

**E. CALIFORNICUM** Hausskn, mon 260. Da 6. Ab 264. Alamitos.

"Tall, rather slender, somewhat branched, glab below, the infl and buds w with lg and rather coarse ascending hairs; lvs oft 75-100 mm lg, lanceolate, subacute, rather remotely serrulate, rounded or acutely tapering to sh petioles, soon glab; fls comparatively few; fr'g ped slender, sometimes nearly equaling the lvs; cap at length nearly glab; sds almost beakless, 0.4x0.9 mm; coma w." Trelease, Mo bot gard r 2:96.

**E. COLEATUM** Muhl ex Willd En 1: 411. Greene. Cal ac b 2:388 Cruz. B 1: 219. Haussk, mon 258. Trelease, Mo. bot gard r 2:92d, 94 (of authors in part as adenocaulon). Can to SC; Wise; Neb;

Mo.

LA; Cruz; S Ber mts (Parish 1148).

**E. FRANCISCANUM** Barbey. B 1:220. Trelease, Mo bot gard r 2:90d, 95, t 15. Ore. Cal.

**E. GLABERRIMUM** Barbey. B 1:220. 2:447. Ha 96. Trelease, Mo bot gard r 2: 104 t 38. Wash. Ore. Cal.

**E. HOLOSERICUM** Trelease, Mo bot gard r 2:91 t 17. Ab 264. Da 6, Cov 102. McClatchie, Er 2:123. Cat.

"Rather woody, loosely branched, at least the upper lvs and branches canescent with subappressed hairs; lvs 50 mm lg, rather remote and smaller on the flg branches, obl-g lanceolate, obtuse or exceptionally acute, undulately low-serrulate, nar'ed or abruptly contracted and then cuneately nar'ed into sh petioles; fls produced in lg succession along the elongated branches, erect, pale, barely 5 mm lg; fr'g ped about 10 mm lg and equalling the lvs; sds sh-beaked, very finely papillate, 0.4x1 mm; coma w or somewhat dingy. Cal: S Ber Co (Parish 1881 n 1022) and Kern Co."—Trelease, lc.

**E. JUCUNDUM** G 12:57. B 2:448. Trelease, Mo bot gard r 2:86 as paniculatum var. jucundum.

**E. LATIFOLIUM** L, sp pl 1:347. B 1:219. Trelease, Mo bot gard r 2:81 t 2. Labrador to Alk. Ore.

**E. LUTEUM** Pursh, Fl 1:259. B 1:219. Trelease, Mo bot gard r 2:82. Ore to Alk. Sib.

**E. MINUTUM** Lindl, Hook Fl 1:207. B 1:220. 2:448. Guad (Palmer, Greene). Ore. Wash, north.

Variety **FOLIOSUM** T & G Fl 1:490. Guad (Palmer) fide Trelease. Mo bot gard r 2:86.

**E. OBOCORDATUM** G 6:532. B 1:218. Par 256. Trelease, Mo bot gard r 2:83 t 6. Cal. Nev.

**E. OPACUM** Lehm, Hook. Fl 1:205. Ore. B 1:219, perhaps a "hybrid between latifolium and spicatum."

**E. OREGANUM** P 1:225, Grants' Pass. Ore. Trelease, Mo bot gard r 2:105 t 40, as a hybrid? of glaberrimum.

**E. OREGONENSE** Hausskn mon 276 t 14 f 66. Ore. north. Trelease, Mo bot gard r 2:109 t 25; Cal?

Variety? **GRACILLIMUM** Trelease lc, t 46. Ha 97.

**E. ORIGINIFOLIUM** Lam, Ency 2:376. B 1:219. = alsinifolium fide lk.

**E. PANICULATUM** Nutt, T & G Fl 1: 490. Ab 264. Ha 97. Par 250. B 1:220. McClatchie, Er 2:123 Pasadena, S Ber (Parish 1021). Trelease, Mo bot gard r 2: 85 t 8.

Sts erect at base, slender, terete, loosely dichotomously branched, glabrate at base, somewhat glandular-pubescent above or nearly smooth, 3-8 dm. hi; lvs chiefly fascicled and alt, lanceolate or linear-lanceolate, acute, sparingly denticulate, tapering to a slender winged petiole, 3-5 cm, lg, becoming smaller and bract-like above; fls scattered toward ends of branches; pet about 8 mm, lg, vio; cap fusiform, falcate, about 2 cm lg; sds about 1 mm broad, 2mm lg, papillate.



**E. PARISHII** Trelease, Z 1:210; Mo bot gard r 2: 97 t 27. Sber Co; Baja. A 1: 335 d.

**E. SPICATUM** Lam, Fl Fr 3:482. Par 250 t. Ha 97. Trelease, Mo bot gard r 2:80 t 1.

Mostly 2° hi, subsimple, glabrate below; lvs 150 mm lg, alt, lanceolate, acute, nearly entire, very sh-stalked, paler below, thin pinnately veined with the evident lateral veins confluent in submarginal loops; Infl elongated, racemose, with sm bracts; young fl-buds soon reflexed but again spreading or ascending before expansion; pet 10-15 mm lg; sty exceeding sta, hairy at base; cap 50-75 mm lg, from subsessile to lg-stalked; sds 0.4x1.4 mm, with very lg dingy coma. Eu. Asia. Greenland, Alk. NC. III. NM. Ar. Cal.

**E. WATSONI** Barbey, B 1:219. Trelease, Mo bot gard r 2:91 t 16. Cal.

**EQUISETUM** L.

**E. ARVENSE** L. B 2:330.

**E. BOREALE** Bong, Veg Stich 174. B 2: 330 as arvense.

**E. EBUENEUM** Schreb. B 2:330 as Telmatela.

**E. FRUVIATILE** Smith, B 2:330 as Telmatela.

**E. HIEMALE** L. B 2:331. Eu. Asia. SF. **E. LAEVIGATUM** Al Br. B 2:331, 485. Cal. Ore. Ohio. La.

**EQUISETUM MEXICANUM** Milde.

Milde, McClatchie, Er 2:122 Pasadena.

Parish, Zoe 5:71. Mohave; CD. (?)

McClatchie, Erythraea 2:122, Catalina.

**EQUISETUM ROBUSTUM** Al Br.

Al Br. B 2:330. Da 20.

Davidson, Erythraea 2:30, Catalina.

Horse-tail rush, SD Co.

Ehrh. B 2:330. Da 20. Br 1:205, Cruz.

**EQUISETUM TELMATEIA** Erh.

San Bernardino (Parish 798).

**ERANTHIS** Salisb, Linn sc tr 8:303 (1807).

**E. HYEMALIS** Salisb, lc, 304. Eu. P 3: 152 as Cammarum hyemale.

**ERECHTITES** Raf, Fl Ludov 65 (1817).

**E. POLYPODIOIDES** P 3:90, based on Senecio gracilipes R & G, Am J sci, sr 3, 1:156.

#### Genus EREMASTRUM Gray.

**EREMIASTRUM** G. Am ac mem sr 2, 5: 320 (1855).

Hd many-fld, heterogamous; the num w rays in 1 sr, fertile; inv campanulate, of nearly =nar scales, outermost nearly foliaceous; receptacle flattish, naked; ligules oblq, entire; branches of sty tipped with a lanceolate appendage; ak obovate-oblg, flat, 1-nerved on each margin; outer pap of 8-10 thin laciniate dissected scales, each of several united bristles, inner pap of about as many stout bristles or awns and some smaller ones intervening.

**E. BELLOIDES** G, lc. B 1:306.

A low daisy-like, hirsute or hispid ann, 1-4' hi, and sending off procumbent branches; "resembling Monoptilon but larger": lvs alt, narly spatulate, entire, disposed to be crowded under the terminal solitary hds, and passing into scales

of inv; hd (including the expanded w rays) about 8" in diam, handsome, disk y. Ut. CD Mohave.

**EREMIASTRUM ORCUTII** S. Watson. A 1:58 fdr. CD.

**ERMINULA** Greene. =Dimeresia G.

**EREMOCHLOE** Wat, bot King 382 t 40 (1871).

**E. BIGELOVII** Wat, lc, 382. NM.

**E. KINGII** Wat, lc, 382 t 40. B 2:200. Cal.

**E. THURBERII** Wat, lc, f 1.=Bigelovii fide lk.

#### Genus EREMOCARPUS Benth.

Stellate-pubescent glandular and heavy-scented an herbs, with alt entire 3-nerved-petiolate, exstipulate lvs, and mon apetalous fls in axyl cymes; ex 5-6-parted, slightly imbricate in the stam fls, 0 in the pist; sta 6-7, central on the hairy receptacle; fl exserted; ova with 4-5 sm glands at base, 1-celled, 1-ovuled; sty simple, filiform, stigmatic at apex; cap obovate-oblg, 2-valved; sd smooth and shining; endosperm fleshy.

**E. SETIGERUS** Bth bot sulph 53 t 26. Greene, Cal ac b 2:412. Cruz. Ab 233. Or W 5:12. Da 16. B 2:68.

Hoary with a dense stellate and spreading hispid pubescence; lvs ovoid or rhomboid, 2-5 cm lg, on slender petioles, the upper crowded and appearing opp or verticillate; pist fls few, lg-pediceled; ex with oblq, obtuse seg, 2 mm lg; stam 1-3 in the axils; ova and sty densely pubescent; cap and sd 4 mm lg. Turkey weed.

Croton setigerus Hooker, Fl Bor Am 2:141 (1838).

Greene Fl Fr. 89 (1891).

Type locality: "On Menzies' Island, and on sandy banks of the Columbia upwards."

"On the sea beach near SD (Parry, Schott). Near San Felipe (Emory). This plant begins to fl and even bear fr when it has scarcely formed a st and all its lvs are in roseate clusters, spreading flat on the ground."—T, bot Mex bound 196 (1859).

#### Genus EREMOCARYA Greene.

Hirsute-canescens low ann with num lfy-bracted racemose branches; rts imparting a p stain; lvs in a basal rosulate tuft; racemes dense, biserial, lfy-bracted; pedicels filiform, sh and persistent with ex: ex 5-parted to base, campanulate in fr, its lobes nerveless, not bristly; cor sm, w: nutlets neither marginated nor carinate, erect, attached for their whole length, groove open, slightly dilated and not furcate at base; sty enlarged in fr and persistent. (P 1:58.)

**E. LEPIDA** P 1:59 based on Eri-trichum micranthum var. lepidum G. Ab 331. Ha 108. SD. Sber Co.

Sts stouter than in E. micrantha, 8-15 cm hi; cor larger, its limb 4-6 mm broad, appendages conspicuous; nutlets nearly 2 mm lg, pectinate-scarious.

**E. MICRANTHA** P 1:59 based on Eri-trichum micranthum T. Ab 331.

Hirsute-canescens throughout; sts slender, erect, diffusely branched from the base, 6-12 cm hi; lvs linear, 4-10 mm lg; fls crowded; cor scarcely 2 mm lg, its

lobes about 1 mm lg, obscurely appendaged at throat; nutlets oblong-ovate, acuminate, smooth or nearly so, about 1 mm lg.

**EREMOSEMIUM** P 4:225 based on Grayia.

**E. BRANDEGEI** P 4:225 based on G. Brandegei G 11:101.

**E. SPINOSUM** P 4:225 based on Chenopodium (?) spinosum Hook Fl 2:127, or G. polygaloides H & A, bot Beech 387.

**ERICAMERIA** Nutt, Am phil sc tr ns, 7: 318 (1841). = aplopappus fide IK.

**E. CUNEATA** McClatchie, Er 2:124 based on A. cuneatus G. LA Co, Ha 126.

**E. DIFFUSUM** Bth, bot sulph 23. B 1: 314 as Bigelovia diffusa.

**E. MICROPHYLLA** Nutt, lc 319. B 1:313 as A. ericoides. A 1:194 as chrysoma ericoides.

**E. NANA** Nutt, lc B 1:314 as A. nanus.

**E. RESINOSA** Nutt, lc. B 1:314 as A. nanus.

**E. ERECTA** Klatt, Ahh Nat Ges Halle 15:326. = A. Bloomeri fide IK.

**E. MONACTIS**, McClatchie, Er 2:124 based on A. monactis G. LA Co.

#### Genus **ERIGERON** Linnacus.

Hort Cliff 407 (1737). A 1:247d.

**E. ACCEDANS** P 4:155.

**E. ACERIS** L, sp pl 653. B 1:327.

**E. ANDERSONII** G 6:540. B 1:325 as Aster A.

**E. ANGUSTATUS** Greene, Cal ac b 1:88 based on inornatus var. angustatus G, Syn Fl 215. (Fries ex Nym Consp 389 = acris fide IK.)

**E. ANNUUS** Pers, syn 2:431. B 1:331.

**E. ARGENTATUS** G 8:649. Z 2:230. B 1:328.

**E. AERERIAEFOLIUS** Turcz ex DC 5: 291. Sib. B 1:326.

**E. BELLIDIASTRUM** Nutt, Am phil sc tr, ns, 7:307. (G, in Hall Ore coll = divergens, fide. B 1:331.)

**ERIGERON BIOLETTII** Greene.

"Size of E. angustatus: whole plant scabrous-puberulent: lvs oblanceolate, obtuse, with sparsely but rigidly hispid-ciliate margins: corymb with branches less divergent: ak appressed-pubescent. On Hood's Peak, Bioletti, and Howell mt, Jepson."—Greene, Man 181.

**ERIGERON BLOCHMANAE** Greene. P 3:25. A 1:59fdr.

**E. BLOOMERI** G 6:540. B 1:328. 2:455.

**E. BREWERI** G 6:541. Parish, Er 7:97 Hesperia, Cal. Cov 126, Soda Springs.

Type locality: "Yosemite valley," Cal; alt 4000'.

**E. CAESPITOSUS** Nutt, Am phil sc tr, ns, 7:307. B 1:327.

Variety **GRANDIFLORUM** Eaton, bot King 153. B 1:328 as in part = nevadense.

Variety **TENERUM** G. B 1:328. Nev.

**ERIGERON CANADENSIS** Linn.

L, sp pl 2:863 (1753). Cov 126, Kern river. Or W 5:12. Da, Er 1:59, LA Co. McClatchie, Er 2:125, Cat. A 1:247. Greene, Cal ac b 2:401, Cruz. B 1:331. Da 8. Ab 404 as Leptilon C.

Type locality: "In Canada, Virginia, nunc in Europa australi."

Throughout temperate N. A. Baja mts! Synonymy: Leptilon canadense Brit-

ton.

**E. CANUS** G, Pl Fendl 67. B 1:328.

**E. CASCADENSIS** M 1:6.

**E. CERVINUS** P 3:163.

**E. CINEREUM** G Pl Fendl 68. B 1:331 as divergens, "a low variety".

**ERIGERON COLVILLEI** Greene.

A 1:59 fdr.

**E. COMPOSITUM** Pursh Fl 2:535. B 1:

**E. COMMIXTUS** P 5:58.

327. Parry, Wyo 14.

**E. COMPOSITUS** P 4:156.

**E. CONCLINUM** T & G Fl 2:174. B 1:330.

**E. CONSOBRINUS** P 3:186.

**E. COEYMBOSUS** P 3:291.

**E. COREYMBOSUM** Nutt, Am phil sc tr, ns, 7:308. B 1:329. Parish, Z 5:119, not likely at "Providence mt".

**E. COULTERI** Porter, Fl Colo, 61. Par. 110.

**E. DECUMBEUS** Nutt, Am phil sc tr, ns, 7:309. B 1:329, 330, 2:455.

**E. DISCOIDEA** K 5:55. B 1:332 as Conyza Coulteri.

**ERIGERON DIVERGENS** T. & G.

Fl 2:175. B 1:331. P 4:155. A 1:247.

Nebr; Texas; Washington; Baja (Br).

**E. DOUGLASII** T & G Fl 2:177. B 1:329 as foliosum; 330, var.

**E. DROBACHENSIS** O. Muell, Fl Dan t 874. B 1:327 as acre L.

**E. DRUMMONDII** P 3:295.

**E. EATONI** G 16:91. Z 2:248.

**E. ELATIOR** P 3:163.

**E. ELATUS** P 3:164.

**E. ELONGATUS** Ledeb, Fl alt 4:91. B 1: 327 as acre L.

**E. EXIMIOUS** P 3:295.

**E. FILIFOLIUS** Nutt, Am phil sc tr, ns, 7:308. B 1:329.

**E. FLAGELLARIS** G, Pl Fendl 68. Z 2: 248.

**E. FLORIFER** Hook Fl 2:20. = Townsendia florifera fide B 2:455.

**E. FOLIOSUM** Nutt, Gamb 177. Am phil sc tr, ns 7:309. B 1:329. Da 8. Ab 403. Ha 127. Greene, Cal ac b 1:88. Br 1:211 Rosa. A 1:247.

Scabrous and somewhat strigore-pubescent, 4-8 dm hi, lfy thruout; lvs narly oblanceolate, entire, about 4 mm broad, 3-6 cm lg; those of the branches reduced; hds hemispheric, 12-14 mm broad; rays about 30, nar, p; ak with a few coarse, bristly sh hairs.

Baja mts! S Ber (Parish); Rosa; Oregon.

Variety **STENOPHYLLUS** A. Gray.

Cruz (Greene); range of type.

A 1:247.

Variety **TENUISSIMUS** A. Gray.

Hanson's! SD Co!

A 1:247.

**ERIGERON FRAGILIS** Greene.

"Tufted sts erect, rigid, slender, 2 or 3' hi, very lfy up to the corymbose summit, dark g or even p'ish, scaberulous: lvs linear-filiform, 1½-2' lg, ascending, rigid, very fragile when dry, rough with minute pustulate incurved hairs; corymbose panicle loose and ample, of 10-15 hds, branches ascending: subulate bracts of the broad-campanulate inv in about 3 series, nearly glab: rays num and nar, deep-violet: ak obliq-linear, nearly glab, or with obvious setiform hairs on and near the raised margins; inner pap finely



capillary, scaberrulous and very fragile, the outer present but inconspicuous, composed of very sh and fine bristles. Trabucco canyon, Orange Co, Cal, Je 1901, LeRoy Abrams (n 1901). Sp in some sort intermediate between *E. foliosus* Nutt and *E. tenuissimus* Greene.—SCA b 1:39 (1 Ap 1902).

**E. FRAGILIS** Greene. Ab 403.

**E. FRATERNUS** P 3:162.

**E. GLABRATUM** Hoppe & Harnsch ex Bluff & Fignern, comp Fl Germ 2:364. Variety **MINOR** Hook Fl 2:18. B 1:327 as *armeriaefolium*.

**E. GLAUCUM** Ker Gawl, bot reg t 10. B 1:330. Par 312 t 338. Greene, Cal ac b 2:401 Cruz. P 1:89 Mig. Br 1:212 Rosa. A 1:247.

**E. GORMANI** P 4:156.

**E. HISPIDUM** Nutt. B 1:331 as probably *glaucom ker*.

**ERIGERON INCOMPTUS** A. Gray.

Syn Fl 1 (2): 218. A 1:247.

Baja! SD foothills.

**E. INORNATUS** G 16:88. Greene, Cal ac b 1:88, Cal, Ore, Wash, Jepson, Er 1:13.

Variety **VISCIDULUS** G, syn Fl 1 (2):

215. P 1:174 as *viscidulus*.

**ERIGERON JACINTHEUS** Hall.

Hall. A 1:60 fdr.

**E. JUCUNDUS** P 3:165.

**E. KINDBERGII** P 3:165.

**E. LONCHOPHYLLUM** Hook Fl 2:18. B 1:327 as *armeriaefolium*.

**E. MACOUNII** P 3:162.

**E. MARITIMUM** Nutt. B 1:331 as *glaucom*.

**E. MEMBRANACEUS** P 3:294.

**E. MICROLONGCHUS** P 3:293.

**E. MISER** G 13:372. B 2:455.

**E. NELSONII** P 3:294.

**E. NEVADENSE** G 8:649. B 7:38.

**E. OCHROLEUCUM** Nutt. Am phil sc tr, ns, 7:309. B 1:328, 2:455.

**ERIGERON PARISHII** A. Gray.

G, syn fl 1 (2): 212. A 1:247.

"Rigid and rather stout, at length somewhat corymbosely branched, lvs spatulate-linear (largest 2" wide or nearly so), rather sh: hds sh-ped: inv cinereous-puberulent and glandular: rays near  $\frac{1}{2}$  lg, p: disk-cor beset with some sparse and sh minute hairs: ak sparsely hirsute: pap conspicuously double; outer setose-sequamellate."—G. Rocky canyons, Mohave (Parish).

**E. PAUCIPETALUS** M 1:140.

**E. PEREGRINUS** P 3:166.

**E. PETROPHILUS** P 1:218, near Berkeley, Cal.

**ERIGERON PHILADELPHICUS** Linn.

L, sp pl 863. B 1:331. Da 8. Z 2:127. Ab 403. Par 222. A 1:247.

Per by stolons, soft-pubescent or sometimes nearly glab: sts slender, mostly branched above, 3-6 dm hi; lower lvs spatulate or obovate, obtuse, dentate, 2.5-7 cm lg, nar'd into a sh petiole; upper lvs clasping, oft cordate at base, entire or dentate; hds several or many, corymbose-paniculate, 1-2 cm broad; peds slender, thickened at summit; inv depressed hemispheric; its bracts linear, com scarious-margined; rays 100-150, 4-8 mm lg, light rose-p; pap simple; ak puberulent.

Fla; Texas; SD Co; SBer Co (Parish).

**E. PLANTAGINEUS** P 3:292.

**E. PLATYPHYLLUS** Gfts 1:145. NM.

**E. PURPUREATUS** P 4:155.

**E. PURPUREUM** Ait, Hort Kew, ed 1, 3: 186. B 1:331 as *Philadelphicum*.

**E. RACEMOSUM** Nutt, Am phil sc tr, ns, 7:312. B 1:327 as *armeriaefolium*.

Variety **ANGUSTIFOLIUM** Nutt. B 1: 327 as *armeriaefolium*.

**E. RADICATUM** Hook, Fl 2:17 t 123. B 1:327. Kcil, W 6:10.

**E. ROBERTIANUS** P 3:293.

**E. SALSUGINOSUS** G 16:93. Par 338.

**ERIGERON SANCTARUM** S. Watson.

Br 1:212, S. Inez mts near SBer; Cruz. A 1:247.

Santa Inez mts, S Bar Co; Rosa.

**E. SETULOSUS** P 4:319.

**E. SONNEI** P 1:218. Nev.

**E. SPATULIFOLIUS** Howell, Fl NW

Am 1:317, M 1:6 as *cascadensis*.

**E. SPECIOSUM** DC 5:284. B 1:330.

**E. SPATHULIFOLIUS** Rydb, Torr cl b 26:545.

**E. STENOPHYLLUM** G, Pac Ry R 4:98. (B 1:330 cites Nutt, Gamb 176, not G, as *foliosum* var. S.) P 1:89 Mig. Greene,

Cal ac b 1:88, 2:401 Cruz.

**ERIGERON STRIATUS** Greene.

Sts 2 or 3° hi, stoutish, very erect, bright-g, glab and notably striate, very lfy up to the corymbose summit; lvs oblq-linear, about  $1\frac{1}{2}$  lg, obtuse, carinate-nerved beneath, glab on both faces, the margins remotely scabrous-denticulate; hds 5-10 on slender rigid ascending bracted ped: inv campanulate their oblq-linear acute bracts in about 3 sr and glab: rays rather few and very nar, deep vio: ak oblq-linear, sparsely strigulose or almost glab, the margins not prominently raised or thickened; inner pap fine and very scabrous, not fragile, the outer scanty and wholly inconspicuous, consisting of few and very sh bristles. Huston Flat, SBer Co, Ag 1900. Dr W. R. Shaw, the specimens communicated by LeRoy Abrams. In habit and foliage this is very much like the northern mt *E. inornatus*, Greene, but the nds and fts are of a very different character."—Greene, SCA b 1:39 (1 Ap 1902).

**E. STRIGOSUM** Muhl, Wlld sp pl 3:1956. B 1:331.

**E. SUPPLEX** G 7:353. B 1:330.

**E. TENUISSIMUS** P 3:25.

A 1:59 fdr.

**E. TRACYI** P 5:59.

**E. UNIFLORUM** L, sp pl 864. B 1:327.

**E. URSINUM** Eaton, bot King 148. B 1:327. Parry, Wyo 17.

**E. VISCIDULUS** P 1:174 based on *inornatus* var. *viscidulus* G.

**ERIOCARPUM** Nutt, Am phil sc tr, ns, 7:320. = *Aplopappus* fide IK.

**E. GEINDELIODEUS** Nutt lc. = *A. Nuttallii* fide IK.

**E. JUNCHEUM** Greene, Er 2:108 based on *Aplopappus juncus* Greene. Mts SD Co, Baja.

**ERIOCARPUM SCABELLUM** Greene.

"Suffrutescent, the lfy flg branches rather slender, and with a sh hirsutulous pubescence, foliage scabrous: lvs narly oblq,  $\frac{3}{4}$  lg, sharply and saliently toothed: hds solitary at ends of

bracted pedunculiform branches; rays light y; ak very pubescent; pap sh'er and more aristiform than in *Eriocarpum junceum*. LA bay, Baja. (Edward Palmer, 1887, n. 539.)—Greene. *Er* 2: 108-9.

**ERIOCHLOA** HBK Nov, Gen et sp 1: 94 t 30, 31 (1815).

**E. PUNCTATUM** Ham Prod Pl Ind Occ 5. Ft Yuma, Cal (Or 2065).

**ERIOCOMA** Nutt, Gen 1:40 (1818). = *Oryzopsis* fide IK.

**E. CUSPIDATA** Nutt, lc. B 2:283. Da 19. = *O. cuspidata*.

**E. MEMBRANACEA** Steud Nom ed 2, 1:586.

**E. WEBBERI** Thurber, B 2:283. = *O. Webberi*.

**ERIODICTYON** Bth, bot sulph 35 (1844). A 1:172d.

**ERIODICTYON ANGUSTIFOLIUM** Nt. Phil ac J. ns. 1:181 B 1:518.

**E. CALIFORNICUM** Greene. A 1:173d. Ab 327. Par 58. (Decne not Voy venus 22 = *crassifolium*.)

**E. CRASSIFOLIUM** Bth. A 1:78d. B 1:518 as *tomentosum*.

*E. tomentosum* Bth non Greene (vide Cal ac pr, sr 3, bot 1:129-130).

**ERIODICTYON GLUTINOSUM** Benth. Bth, lc 36. B 1:518, 2:468. Da 12. Z 2: 120, 158. Par 58 t. A 1:173 as *Californicum* Greene.

**E. FARREYI** P 2:22 based on Nama P. A 1:172 as Nama P, 173.

**ERIODICTYON NIVEUM** Eastwood, Cal ac pr, sr 3, bot 1:130 f d.

*E. tomentosum* Greene non Bth.

Type locality: Jolon, Monterey Co, Cal.

**ERIODICTYON SESSILIFOLIUM** Grne. A 1:12 fdr.

**E. TOMENTOSUM** Bth, bot Sulph 36. B 1:518. Da 12. Ab 328. Par 58. A 1:173.

Shrub, 25-30 dm hi, w'ish tomentose with a more or less dense coat of sh villous hairs, sometimes rusty-colored, branches lfy to top; lvs oblg or oval, rigid, obtuse. 5-10 cm lg; cymes at length broad; cx densely villous, cor slightly so; cor somewhat salver-shaped and about twice the length of cx.

**E. TRASKIAE** Eastwood.

"Densely w-tomentose, except the dark-colored, glandular-hirsute cx: lvs elliptical, 5 cm lg, 15 mm wide, acute at apex, base nar'd to a petiole 5 mm lg, margins dentate except near base. veins distinct on the lower surface, barely evident on the upper; panicle slightly surpassing lvs. with branches spreading or curving upwards, rather slender, glandular and tomentose, bracts from elliptical with dentate margins to lanceolate or linear with margins entire; cymes densely fid; fls sm, on pedicels 1 mm or more in length; ex divisions 5, nar'y linear, not uniform in length, 4-5 mm lg; cor p, tube equalling cx, 5 mm lg, contracted at base and throat, furrowed longitudinally, divisions of limb irreg orbicular, not uniform in size, glandular-hirsute externally as well as the upper part of the tube sta inserted half way down the tube, almost sessile; sty branches glab, 1½ mm lg; ova ovoid, glandular-hirsute; fr unknown."—Eastwood, Cal

ac pr, sr 3, bot 1:131 t 10 f 2 a—2 c. Cat. **E. TRICHOCALYX** Heller. A 1:173 fdr. M 1:108.

#### Genus ERIOGONUM Michx.

Fl 1:246 t 24 (1803). A 1:279d.

**E. ABERTEANUM** T, Emory R 150, NM Baja. B 2:22.

**E. ACETOSELLOIDES** T ex Bth, DC 14: 16. = *gracile* fide IK.

**E. AFFINE** Bth, DC 14:13. = *nudum* fide IK.

**E. ALATUM** T, Sitgreaves R 168 t 8.

**E. ALBUM** Nutt, Gamb 164. B 2:26 as *dichotomum*.

**E. ANEMOPHILUM** P 3:199. Nev.

**ERIOGONUM ANGULOSUM** Benth. Linn sc tr 17:406 (1837). Cov 185, Coso mts. B 2:25. Da 14.

CD (Parish 974; Agua Dulce, Baja (Br).

**E. ANSERINUM** P 4:320. Modoc Co, Cal.

**ERIOGONUM APICULATUM** S. Watson. Wat 17:379.

San Diego mts (Parish 971). Ha U 72.

**E. ARACHNOIDEUM** Esch, ac Peters men 287. A 1:280 (et IK) as *latifolium*.

**E. AECULATUM** P 4:319. Colo.

**E. ARIDUM** P 3:200. Nev.

**ERIOGONUM ARBORESCENS** Greene. Cal ac b 1:11; 2:410:—"about 6° hi when well grown, shrubby and evergreen, forming a rounded and compact bush."

Br 1:216 Rosa. Cur as *fasciculatum*.

**E. APEICULATUM** Bth, Linn sc tr 17: 412, nomen nudum. A 1:280 as *latifolium*.

**F. AZALEASTRUM** P 5:67. Nev.

**ERIOGONUM BAILEYI** S. Watson. Wat 10:348. Ha 73. Cov 185. Nev, Cal, Ar, Ut. B 2:31.

Hanson's! Kern Co; Nevada; Arizona.

Very diffusely much-branched, 1° hi or less, glau and glab (rarely tomentose thruout) except lvs, which are densely w-tomentose both sides, orbicular to broadly ovate, 3-6" broad; bracts sh, triangular or lanceolate; inv 1" lg or com less, somewhat wider above, teeth obtuse: fls light rose or y'ish, ½-¾" lg.

Variety *TOMENTOSUM* Sereno Watson.

San Ber Co; (Lemmon); Cantilles mts. Wat 12:268. B 2:31. Loosely floccose-tomentose thruout, bracts more linear; inv broadly turbinate, deeply toothed. SBER Co. Cantilles mts!

**E. BLOOMERI** Parish. A 1:82 fdr. Ab 118.

**ERIOGONUM BRACHYPODUM** T. & G. G 8:180. B 2:23.

Low and depressed, very divaricately much-branched and rather rigid, beset thruout (except lvs) by scattered sh glandular hairs: lvs densely tomentose both sides, orbicular, 3-6" in diam; st sh: inv turbinate-campanulate, ½-2-3" lg, on pedicels less than 1" lg, more or less deflexed: fls 1" lg, rose, outer seg cordate-ovate, obtuse, inner ½ as wide, obtusely acuminate. SBER Co.

**E. CAESFITUOSUM** Nutt, Phil ac J 7:50 t 8. T & G rev Eriog, Am ac pr 8:157. B 2:19. Nev. Wyo.

**E. CERNUUM** Nutt, Gamb 162. B 2:23. Ore, Nev, Ut, Colo, NM.

**ERIOGONUM CINEREUM** Benth. Bth bot sulph 45. DC 14:8. B 2:27. Da 15. Ab 117. A 1:279d.



Curran once referred *E. giganteum* to this, but later published a variety of that species.

San Pedro and Monica on seashore.

**E. CLAVATUM** Small. A 1:101 fdr.

**E. COGNATUM** P 3:201. Mt SF, Ar.

**E. COMPOSITUM** Dougl. B 2:20, 480, Wash, Id, Mendocino Co.

**E. CORYMBOSUM** Bth, DC 14:17. B 2:28.

**E. CRASSIFOLIUM** Bth, Hook Fl 2:134 t 176. B 2:21 as *Flavum* Nutt.

**ERIOGONUM CRENULATUM** Parry.

Colorado Desert (Parish).

**E. DASTANTHEMUM** T & G. B 2:30, Jepson, Er 1:12. Nev, Cal.

**E. DAVIDSONI** Greene. A 1:82 fdr.

**E. DEDUCTUM** P 5:71. Sierra Nev of Cal.

**E. DEFLEXUM** T, Ives R 24. B 2:23. Ut. Ar, Mohave.

**ERIOGONUM DELICATULUM** S. Wat.

Wat. 17:379. Da 15.

**E. DENSUM** P 3:17.

**E. DENUDATUM** Nutt, Phil ac J, ns, 1:161. A 1:213 as *Nemacaulis* Nuttallii.

**ERIOGONUM DESERTICOLA** S. Wats. A 1:88 fdr.

**E. DICHOTOMUM** Dougl. DC 14:14. B 2:26. P 4:320. Ore. Yreka.

**E. DOUGLASII** Bth. DC 14:9. Ore. Sierra Co, Cal. B 2:19.

**E. DUMOSUM** P 3:199. Plumas Co, Cal.

**E. EFFUSUM** Nutt. B 2:28 as *microthecum*.

**E. ELATUM** Dougl. B 2:27. Wash, Nev, Yreka.

**E. ELLIPTICUM** Nutt, Gamb 161. B 2:20 as *stellatum*.

**ERIOGONUM ELONGATUM** Benth.

Bth, bot Sulph 45. DC 14:14. B 2:29. Da 15. Ab 118. A 1:280d.

Monterey to Baja; LA (Davidson).

**E. ERICAEFOLIUM** T & G. B 2:28 as *fasciculatum*.

**ERIOGONUM FASCICULATUM** Benth. B 2:28, 481. Da 15. Z 2:337, 371. Par 34 t.

P 1:207 Cedros. A 1:280d. Ab 117. Ha 73. Bentham, Linn soc tr 17:411 (1837).

Type locality: "Upper California."

Coville, CNH 4:186. Sber.

"Buckwheat." Arizona; Utah; S Bar to Baja. Most excellent bee pasturage. Ha U 73.

**ERIOGONUM FASTIGIATUM** Parry.

A 1:67 fdr.

**E. FLAVUM** Nutt. B 8:21. Ore, Wash, Ark, Parry, Wyo 6. P 4:319.

**E. FLEXUM** M E Jones, Z 2:15. Ar.

**ERIOGONUM FOLIOSUM** S. Watson.

A 1:87 fdr.

**ERIOGONUM GIGANTEUM** S. Watson.

A 1:82 fdr.

Variety **FORMOSUM** K. Br. A 1:82 fdr.

**E. GLANDULOSUM** Nutt. B 2:25, probably NM or Colo. Cuyamaca (Or 487); referred to *apiculatum* by Parry.

**E. GLAUCUM** Small. A 1:101 fdr.

**E. GORDONI** Bth, DC 14:20. B 2:25. Colo.

**ERIOGONUM GRACILE** Benth.

Bth bot Sulph 46. DC 14:17. B 2:31. Da 15. Ab 119. A 1:280d.

S F; San Fernando, Baja (Br). Ha U 73.

**E. grande** Greene plitt 1:33. Cruz.

**E. rubescens** Greene, plitt 1:33. Cruz.

Abrams, Fl LA 119.

Variety **LEUCOCLADON** Torrey.

Less branched, branches strict, becoming glabrate; fls pale rose.

Ab 119. A 1:280d.

**E. GRACILLIMUM** B 2:480. Mohave.

**E. GRANDE** P 1:38. Greene, Cal ac b 2:410 Cruz. A 1:101, 102 fdr, 280 as *gracile*.

**E. GREENEI** G 12:83. B 2:26 as *dichotomum*.

**E. HEEZMANNI** D & H, Pac Ry R 5:14 t 17. B 2:30. A 1:77.

**E. HELIANTHEMIFOLIUM** Bth, B 2:29 as *Wrightii*.

**E. HERACLEOIDES** Nutt. B 2:20, Wash, Nev, Ut.

**E. HIETIFLOREM** G. Wat 12:259. B 2:22, 480. A 1:78.

**E. HOOKERI** Wat, B 2:23. Ut.

**E. INCANUM** T & G, Am ac pr 8:161. B 2:21.

**ERIOGONUM INFLATUM** Torr.

Frem r 317. B 2:25. Cov 186, Funeral mts, etc.

Ft. Mohave; Nevada; Arizona.

**ERIOGONUM INSIGNE** S. Watson.

Wat 14:295. B 2:23. Ut. Cov 186. Br 2:202. Cajon de Santa Maria, Baja.

**E. INTRICATUM** Bth, bot Sulph 46 t 22. P 1:289, San Bartolome bay, Baja (type locality). B 2:31.

**E. IREBITUM** Br 2:202. Agua Dulce, Baja.

**ERIGONUM JUNCEUM** Greene.

"Suffrutescent, the woody and densely lfy branches only a few i hi, loosely

cespitose, w-tomentose, as are also the sm obovate or obovate-elliptic lvs:

slender ped 5-9' hi, perfectly glab, of a vivid g and seedy-looking, com but once-

forked, bearing inv  $\frac{1}{2}$ - $\frac{3}{4}$ ' apart, these sessile, nar-campanulate, glab, obtusely

toothed; perianth w, seg with r-brown midvein, all obovate and very obtuse."—

Gifts 1:77. Kern river canon, Tulare Co, Cal. Jac?

**E. KELLOGGII** G 8:293. B 2:22. Mendocino Co.

**E. KENNEDYI** Porter. Wat 12:263. B 2:26. Kern Co.

**E. KINGII** T & G. B 2:26. Nev.

**ERIOGONUM LATIFOLIUM** Smith.

P 2:26. Da 14. Z 2:371. A 1:280d.

Abrams, Fl LA 117. Bluffs near Monica.

Curran, Cal ac pr, sr 2, 1:268. Cites as synonyms: *EE arachnoideum* Esch,

*affine* et *auriculatum* Bentham, *grande* Greene *nudum* Dougl, et *var pauciflorum*

S. Watson, *oblongifolium* Bentham, et **E. LEXMONI** Wat 12:266. Nev. B 2:29.

**E. LEUCOCLADON** Bth. B 2:31 as *gracile*.

**E. LOBBII** T & G, Am ac pr 8:162. B 2:20.

**E. LONGULUM** P 5:70. Lake Co, Cal.

**E. LUTEOLUM** P 3:200. Napa Co, Cal.

**E. MARIFOLIUM** T & G, Am ac pr 8:161. B 2:21.

**E. MICROTHECUM** Nutt. B 2:28. Ore, Nebr, NM.

**ERIOGONUM MINUTIFLOREM** Wats.

**E. MOHAVEENSE** Wat 12:266. B 2:28. Mohave.

**E. MODOCENSE** P 5:68. Modoc Co, Cal.

**ERIOGONUM MOLESTUM** S. Watson.

Wat 17:379. Da 15. Ha 73.

**E. MOLLE** Greene.

"Shrubby, the leafy branches a ft or 2 hi: lvs obliq, obtuse at both ends, 2-4' lg on petioles nearly as lg, cinerous above and beneath with a dense sh velvety pubescence and altogether devoid of w wool: inv few, many-fld, corymbose at summit of stout naked ped at ft or 2 lg. Rocky summits of the extreme north end of Cedros Island; a species of singular aspect; not in fl."—P 1:207.

**E. NIVEUM** Dougl. B 2:26. Wash. Ore Id.

**E. NEGLECTUM** P 5:69. Colo.

**E. NODOSUM** Small. A 1:157 fdr.

**ERIOGONUM NUDUM** Dougl.

Douglas, MS, in Benth. Linn soc tr 17:413 (1837).

B 2:27. Ab 117. Br 1:216 (cites grande et rubescens as synonyms), Rosa. Par 34. A 1:280 (as latifolium), 231d. Wash to Baja.

Type locality: "plains of the Multoonah."

Coville, CNH 4:187. Tehachapi canyon.

Abrams, Fl LA 117. Cat.

Variety **OBLONGIFOLIUM** Wat 12:264. B 2:27. Cov 187. Ha 74.

Variety **PAUCIFLORUM** Wat 12:264. B 2:27. A 1:280 as latifolium.

**E. NUTANS** T & G. Wat, bot King 307 t 33. B 2:23. Lassen Co, Cal. Nev.

**E. OBLANCEOLATUM** P 5:71. Mt St. Helena, Cal.

**E. OBLONGIFOLIUM** Bth. A 1:280 et B 2:27 as latifolium.

**E. OCHROCEPHALUM** B 2:480. Nev.

**ERIOGONUM ORCUTTIANUM** S. Wats. A 1:77 fdr.

**E. OVATUM** P 5:69. Lassen Co, Cal.

**E. OVULIFOLIUM**.

Nutt, Phil ac J 7:50. B 2:26. Cov 187. Parry, Wyo 4, 14.

**ERIOGONUM PALMERI** S. Watson.

Wat 12:267. B 2:30. Julian, SD Co. Ut. Cov 187 as plumatella.

**ERIOGONUM PARISHII** S. Watson.

SBer mts (Parish); Baja mts!

**ERIOGONUM PARRYI** A. Gray.

G 10:77. So Ut. Cov 187. Nev.

Colorado Desert (Parish, Orcutt).

**ERIOGONUM PARVIFOLIUM** Smith.

Bth. bot sulph 12. B 2:27. A 1:281d.

Abrams, Fl LA 117. Common on the sand-dunes along the seashore.

Davidson, Pl LA Co 15.

SBar; Soledad, SD Co (Or 974).

**E. PHARNACEOIDES** T, Stigreeves r 167 t 11. B 2:22. Ar. Nm.

**E. PIPERI** P 3:263. Wash.

**ERIOGONUM PLUMATELLA** D. & H. Pl HErm 45. Pac Ry R 5 (3): t 16. Cov 187.

Colorado Desert (Parish); Nevada.

**E. POLIFOLIUM** Bth. B 2:28 as fasciculatum, "a com hoary form, with less revolute lvs and elongated peduncles."

**ERIOGONUM PONDII** Greene.

P 1:267, 289, San Bartolome bay, Baja. Cedros Island (Pond).

**E. POLYANTHUM** Bth, DC 14:12. B 2:20 as stellatum.

**E. POLYCLADON** Bth. B 2:31. Ar. NM.

**E. PROLIFERUM** T & G. B 2:26 as ovalifolium var.

**ERIOGONUM PUSILLUM** T. & G.

Wat 8:184. Cov 188, Coso mts. Da 14. A 1:77. B 2:24.

SBer Co; Nevada; Arizona.

**E. PYROLAEFOLIUM** Hook, Kew J bot 5:395 t 10. B 2:21. Mt Shasta.

**E. RECLINATUM** P 5:67. Cal Sierra; Nev.

**ERIOGONUM RENIFORME** Torr.

Frem 2d r 317 (1845). Da 14. B 2:24.

Type locality: "on the Sacramento river." Cal.

Coville, CNH 4:188. "Found in recent years only in the Mohave Desert region, and it is probable that Fremont collected the original specimens there."

Ft. Mohave; CD; Baja.

**E. ROSEUM** D & H, Pac Ry R 5:14 t 15. B 2:30 as virgatum.

**E. ROSMARINIFOLIUM** Nutt, Gamb 164. B 2:28 as fasciculatum.

**E. ROTUNDIFOLIUM** Bth. B 2:24. Tex. NM.

**E. RUBESCENS** P 1:39, 92 Mig. Greene, Cal ac b 2:410 Cruz. A 1:101 fdr, 280 as gracile et latifolium (vide nudum).

**E. RYDBERGII** P 5:68. Yellowstone Park.

**E. SALSUGINOSUM** Hook, Kew 5:264. Z 2:16.

**ERIOGONUM SAXATILE** S. Watson.

B 2:29. A 1:281d.

Abrams, Fl LA 118. Gabriel, SBer mts.

McClatchie, Erythraea 2:78; Mt Lowe, L. Co.

Watson, Am ac pr 12:267 (1877).

Coville, CNH 4:188. Panamint mts. Santa Lucia mts; SBer (Parry). Ha U 74).

**E. SCALARE** Wat 12:261. B 2:25. El Rosario, Baja! (E. irretitum Br.)

**ERIOGONUM SPECIOSUM** Drew.

A 1:281 fdr.

**E. SPERGULINUM** G 7:389. B 2:22, 480.

**E. SPHAEROCEPHALUM** Dougl. B 2:19. Wash. Nev. Cal.

**ERIOGONUM STELLATUM** Benth.

Linn sc tr 17:409. B 2:20. Ha 74.

Oregon to So Cal; Utah; Arizona.

Variety **BAHIEFORME** B 2:20—"infr much branched; lvs mostly sm and oft densely tomentose on both sides." Ft Tejon; Mt San Carlos.

**E. STRICTUM** Bth. B 2:29. Ore.

**E. SUBALPNUM** P 3:18.

**E. SUBRENIFORME** Wat 12:260. B 2:25. Ar. Ut.

**E. SULPHUREUM** P 5:70. Near Yreka, Cal.

**ERIOGONUM TAXIFOLIUM** Greene.

P 1:267, Cedros. A 1:81 fdr.

**ERIOGONUM THOMASII** Torr.

Pac Ry R 4:364. B 2:24. Z 2:250. Cov 188, Panamint valley. CD. Baja. Colo.

Ft Mohave.

Type locality: "near Ft Yuma." Cal. CD; Baja; Colo (Br). Ft. Yuma to Ft. Mohave.

**E. THURBERI** T, A 1:102 fdr. B 2:24. Da 14. Ab 116. Z 2:250.

**E. THYMOIDES** Bth. B 2:19, Ore, Wash.

**E. TOLMIEANUM** Hook Fl 2:134. B 2:20 as umbellatum variety monocephalum.

**E. TORREYANUM** G. B 2:20.

**E. TRACHYGONUM** T. B 2:29 as Wrightii.



**E. TRICHOPES** T, Emory r 151 = tri-chopodum (error).  
**ERIOGONUM TRICHOPODUM** Torr.  
 B 2:24, 480. Da 15.

Utah; Ft. Mohave; CD! Baja! N. M.  
**E. TRIPODUM** P 1:39. Lake Co, Cal.  
**E. TRUNCATUM** T & G, Am ac pr 8:  
 173. B 2:28.

**ERIOGONUM UMBELLATUM** Torr.  
 Ann NY Lyc 2:241. B 2:19. Cov 188,  
 Inyo mts. Par 182 t.

Oregon to SBer mts (Parish 594).  
 Variety **MONOCEPHALUM** T & G. B  
 2:20.

**E. URSINUM** Wat 10:347. B 2:21, 480.  
 Par 182.

**ERIOGONUM VAGANS** S. Watson.  
 A 1:77d.

**E. VILLIFLORUM** G. B 2:22.

**ERIOGONUM VIMINEUM** Dougl.  
 B 2:30. Da 15. Ab 119. Er 1:12. A 1:87,  
 213d.

Washington; Nevada; Baja!  
**ERIOGONUM VIRGATUM** Benth.  
 Benth., in DC Prodr 14:16 (1856).  
 Type locality: "in California."

Coville, CNH 4:188.  
 Davidson, Pl LA Co 15.  
 Jepson, Erythra 1:13.  
 Abrams, Fl LA 119.  
 Siskiyou Co (Greene).

B 2:30. Er 1:13. Ab 119. A 1:213d.  
**E. WATSONI** T & G, Am ac pr 8:182.  
 B 2:23.

**ERIOGONUM WRIGHTII** Torr.  
 Abrams, Fl LA 118. Gabriel mts.  
 Sacramento to Baja! N. M.; Nevada.

DC 14:15. B 2:29. A 1:213d.  
 Variety **SUBSCAFOSA** Wat. Da 15. Ha  
 74.

Variety **TAXIFOLIUM** Parish.  
 E. Taxifolium Greene, pitt, 1:267; 2:295.  
 A 1:214d.

**ERIOGYNIA** Hook Fl 1:255 t 88  
 (1833). = *Spiraea* fide IK.

**E. PECTINATA** Hook, lc. B 1:171.2:443.  
 = S: p.

**ERIOFAPPUS** Arn in Lindl Int Nat  
 syst ed 2, 443 (1836). = *Layia* fide IK.  
**E. GLANDULOSUS** Arn, lc. B 1:368 as  
 L: g.

**ERIPHORIUM** L, syst ed 1 (1735).  
**E. GRACILE** Koch, Roth Cat 2, add  
 259 (1788). B 2:220. Z 2:4, 378.

**E. POLYSTACHYUM** L, sp pl 52. B 2:  
 220.

**ERIOPHYLLUM** Lag, Gen et sp nov 28  
 (1886).

Shrubs or herbs with entire or di-  
 vided lvs clothed with cottony wool, es-  
 pecially on under side: fls y: inv-bracts  
 lance-shaped, united at base: pap of  
 membranaceous scales.

Sec: **ACTINOLEPIS** (DC 5:655 as gen).  
 Low and diffuse winter-ann, with sh-  
 ped or sessile hds only 2 or 3" hi: inv-  
 bracts few, distinct to base, herbaceous  
 or chartaceous in age: anth-tips ovate-  
 lanceolate to linear-subulate.

\*Hds sessile or nearly so in forks or  
 at summit of branches, then subtended  
 by a lf or glomerate, 2" hi, wholly y-  
 fid: receptacle flat or barely convex:  
 anth-tips ovate-lanceolate, obtuse: lvs  
 sm, spatulate, com 3-lobed or 3-toothed  
 at summit.

**E. MULTICAULE** G 19:24.

Whitened with rather close cottony  
 wool, sometimes denudate in age: sts  
 slender, at length much branched, a  
 span hi, most of internodes exceeding  
 lvs: rays 3-5, obovate, 1" lg: ak glab-  
 rate: pap of 10-15 rather firm narly  
 subulate or almost aristiform paleae,  
 or sometimes 0 in all or some of disk-  
 fls, especially when these are infertile:  
 then their sty is only minutely forked  
 at apex. SBer. Tucson.

**E. RINGLI** G 19:25.

Rays 0: fls all fertile: ak villous.  
 Mohave. Tucson.

\*\*Hds pedunculate, terminating  
 branches, 3-4" hi: receptacle convex or  
 conical: plants 3-5" hi, erect and at  
 length diffuse, with mostly entire lvs.

†Rays about 5, inconspicuous: disk-  
 fls not num: anth-tips ovate-oblg, ob-  
 tuse.

**E. NUBIGENUM** Greene, G 19:25. Z 2:  
 163. Yosemite.

††Rays 5-9, exerted and ample, oval  
 or oblg: disk-fls more num: anth-tips  
 nar and slender: receptacle high-convex  
 or obtusely low-conical.

**E. WALLACEI** G 19:25. Ha 127.

Thickly clothed with cottony wool:  
 lvs obovate or spatulate, occasionally 2-3-  
 toothed at apex: pap of 6-10 sh-oval or  
 obovate obtuse and pointless nerveless  
 paleae, of firm texture and opaque: sty-  
 tips somewhat subulate-conical: cor all  
 y. SD Co! Ar. Ut.

**E. LANOSUM** G 19:25.

Rays w or rose-color. Ar. Ut. Mohave.  
 Sec: **TRICHOPHYLLUM** (Nutt as gen).  
 Larger, erect: hds when clustered sm,  
 when solitary com rather large: inv-  
 bracts of firm texture: rays and disk-  
 fls golden y: cor-tube com glandular or  
 hairy: anth-tips ovate, mostly obtuse:  
 ak linear or cuneate-linear, glab or  
 nearly so: pap of sh opaque and nerve-  
 less and pointless paleae, sometimes very  
 sm, rarely obsolete or 0.

\*Suffrutescent, or suffrutescent, lfy to  
 top, branching: hds sm, compactly  
 corymbosely cymose, sh-peduncled:  
 ligules roundish-oval, 1-2" lg: pap of  
 oblg-linear paleae much sh'er than ak:  
 lvs mostly lobed or divided and mar-  
 gins revolute.

**E. STACHADIFOLIUM** Lag, Gen et  
 sp nov 28. Br 1:213 Rosa. Z 2:359 SF.

Canescent with close-pressed pannose  
 tomentum, at length partly denudate,  
 1-4" hi from a woody base: lvs once or  
 twice pinnately parted into linear di-  
 visions and rhachis, or upper linear  
 with a pair of lateral lobes, or some of  
 them entire, upper face soon glabrate,  
 and g: hds 3-4" hi, num in rather loose  
 paniculate clusters: inv cylindraceous-  
 campanulate; its bracts 8-10, linear-  
 spatulate to narly-oblg, thinnish: recep-  
 tacle convex, alveolate-toothed: rays  
 6-8: paleae of pap 8-12, 4 over ak-  
 angles rather longer. SBer.

Variety **DEPRESSUM** Greene, Cal ac  
 b 2:404,—"Sts stout 1" lg or less, de-  
 pressed, forming a low hemispherical  
 tuft: lvs broad and with about 2 pairs  
 of divaricate linear-oblg lobes. A

plant in aspect extremely unlike the continental type of the sp; but the fls and fr present no characters. Frequent on cliffs near the sea, on the north side only [of Cruz].

**E. NEVINII** G, Syn Fl 2 (1): 452. Br. Z 1:114 Cat.

"St about 3° hi, decidedly woody below: lvs comparatively large, equally w-tomentose on both sides, twice pinnately parted into nar and very obtuse seg and lobes: corymbiform and compound cymes naked-peduncled, of very many and much crowded hds: bracts of inv mostly 3-4-nerved: receptacle wholly naked: rays not surpassing disk-fls: pap of 4-6 oft unequal paleae. Island of San Clemente; off SD, on rocks overhanging the sea, Nevin & Lyon, Ap 1885."—G.

### ERIOPHYLLUM CONFERTIFOLIUM

G 19:25. Par 186. P 1:90 Mig; 1:205 Cedros. Da 9. Ab 430. Z 2:359 SF. A 1:304d.

Variety **LAXIFOLIUM** G 19:25. Hds loosely fastigiate-cymose and mostly slender-peduncled. Cal. Ha 127. Golden Yarrow.

Variety **TRIFIDUM** G 19:25. A form with sm sh lvs, simply 3-5-cleft into oblg or sh-linear lobes. SBer.

\*\*Herbaceous, com (perhaps always) per: nds larger, mostly solitary or scattered and conspicuously pedunculate: receptacle from convex or low conical to flat (even in the same sp): ligules 6-13,  $\frac{1}{4}$ - $\frac{1}{2}$ "lg, oblg or oval: lvs variable.

\*Ak glab, glabrate, or sparsely appressed-pilose, not glandular.

**E. CAESPITOSUM** Dougl, Lindl, bot reg t 1167. Jepson, Er 1:12. Z 2:359 SF.

Floccosely w-woolly, many-stemmed from rt: lvs in age with upper face oft glabrate; lower ones from incisedly 3-5-lobed to pinnately parted, or upper varying to linear and entire: inv-bracts 8-12, oblg or oval: disk-cor tube mostly hirsute-glandular and longer than pap, which is variable, sometimes very sh, sometimes obsolete. Extremely variable and widely distributed, many forms having received varietal names or described as species.

Variety **ACHILLAEOIDES** G 19:25.

Ak sparsely pubescent or glabrate. Cal near sea.

Variety **INTEGRIFOLIUM** G 19:25.

Low, oft dwarf, cespitose-tufted, 3-10' hi. Mont, Wyo, SBer Co.

Variety **LATIFOLIUM** G 19:26.

Sts com 2° lg, branched and lax when growing in shade: lvs thin, dilated, from rhombic or cuneate to oblanceolate, 3-5-lobed and incised or dentate, lobes oblg to broadly lanceolate: ped sh: rays 9-13: cor-tube either sparsely or densely hirsute with gland-tipped hairs, much longer than pap, rounded paleae of which not wider than the narly oblg-cuneate or nar'er glab ak, com very sh and forming a crown, sometimes 0.

Variety **LEUCOPHYLLUM** G 19:26.

Span to 1° hi, rather strict: lvs nar, entire or sparingly cleft or parted:

hds solitary, lg-peduncled: inv campanulate, 4-5" hi, of about 8 oblg bracts: pap in typical plant of nar lanceolate paleae, 4 com twice as lg as others. Brit Col to Cal; Idaho.

Variety **GRANDIFOLIUM** G 19:26.

Rather strict and stout, densely woolly: lvs all linear or lower narly lanceolate or spatulate, laciniate-serate or entire, or some parted into a few narly linear divisions: hds solitary, lg-peduncled: inv  $\frac{1}{2}$ ' hi, hemispherical, densely woolly, of 10-13 bracts: rays as many, large: ak com pubescent: cor-tube sparsely hirsute glandular. Guad. Cal.

††Ak and cor-tube glandular: st slender, under 1° hi.

**E. GRACILE** G 19:26. Idaho.

**E. WATSONI** G 19:26. Nev.

\*\*\*Ann, with lvs apparently all alt; hds sm, pedunculate, terminating lax branches: receptacle conical: pap a crown of sm paleae, not longer than width of summit of ak, sometimes sh or 0: sty-tips conical.

**ERIOPHYLLUM AMBIGUUM** A. Grav. San Bernardino mountains (Parish).

G 19:26, based on *Bahia ambigua* and *parviflora* B 1:382.

Other sp of the genus are:

**E. ARACHNOIDEUM** Par 188 (based on *Bahia arachnoidea* Fisch & Lallement, Ind Sem Hort Petrop 1842; G, Pl Frem 109; B 1:382), treated by G as *caespitosa* var *latifolium*.

**ERIOPHYLLUM OBOVATUM** Greene.

Er 3:123. A 1:66 fdr.

**E. TERNATUM** P 3:185. Ore.

**E. TANACETIFOLIUM** Greene.

"Sufrutescent below, erect slender, 2° hi, lfy thruout: lvs thinnish, sparingly floccose beneath, from palmately trifid to somewhat pinnatifid: hds 3-7, nearly or quite sessile at the summit of the simple st; inv oval, 2" hi, bracts broad and nearly equal, acutish; rays 0; ak with a few closely appressed hairs and no resin-glands; pap of about 8 unequal linear obtuse or retuse paleae. Wooded hills of Calaveras Co, Cal, between Sheep Ranch and Murphy's, Je 1889." P 2:21.

**ERYSIMASTRUM** Rupr, Fl Cauc 76 (1869). = *Erisimum* fide IK.

**E. CHEIRANTHUS** Traut, Act Pet 8: 105. P 3:138 as *Cheiranthus turritoides*.

**ERITRICHIMUM** Schrad, in Comm Gotting 4:186 in obs (1820).

**E. ANGUSTIFOLIUM** T, Pac Ry R 5: 363. B 1:528. (Wat, bot king 241 = muriculatum fide. B 1:528:) A 1:205 as *Cryptanthe ambigua*.

**E. BARBIGERUM** G, Syn Fl 194. B 2: 468. P 1:114 as *Cryptanthe* b. A 1:206 as *Cryptanthe* b.

**E. CALIFORNICUM** DC, B 1:526. = *Allocarya hispidula*.

Variety **SUBGLOCHIDIATUM** G. B 1: 526. P 1:16 as *Allocarya scopulorum*.

**E. CANESCENS** G B 1:526.

**E. CHORISIANUM** DC 10:130. B 1:525. G 10:56. P 1:13 as *Allocarya* C.

**E. CIRCUMSCISSUM** G 10:58. B 1:527. F 1:59 as *Piptocalyx* c.

**E. CONNATIFOLIUM** K 2:103 f 51. B



1:525 as *chorisianum*. Cur 1:143 as *Krynitzkia Chorsiana*. P 1:13 as *Allocarya C*.

**E. FULVOCANESCENS** G 10:91. B 1:529.

**E. FULVUM** A DC. B 1:526 (Wat bot king 243 = *tenellum* fide B 1:526.)

**E. GLOMERATUM** DC. B 1:528.

Variety **PULVOCANESCENS** Wat. B 1:529 as sp.

**E. KINGII** Wat, bot king 243 t 23. B 1:528.

**E. LEIOCARPUM** Wat. B 1:527.

**E. LEUCOPHAEUM** A DC 10:129. B 1:529. P 1:58 as *Oreocarya l*.

**E. MICRATHUM** T. B 2:468.

Variety **LEPIDUM** G. P 1:59 as *Eremocarya lepidum*.

**E. MURICULATUM** T. Wilkes exp 17: t 13. B 1:528. A 1:205 as *Cryptanthus ambigua*.

Variety **AMBIGUUM** G. A 1:205 as *Cryptanthus ambigua*.

**E. OKYCARYUM** G 10:58. B 1:527. P 1:116 as *Cryptanthus flaccida*.

**E. PLEBEIUM** T, Pac Ry R 4:124. B 1:526 as *scouleri*.

**E. PTEROCARYUM** T, bot Wilkes exp 415 t 13 B. Wat, bot King 245. B 1:529.

**E. SCOULERIA** A DC B 1:525.

**E. TENELLUM** G. B 1:526.

**E. TORREYI** G. B 1:527.

**E. RACEMOSUM** Wat. G 17:226. P 1:115 as *Cryptanthus r*. A 1:207 as same.

**E. COOPERI** G 19:89. P 1:19 as *Allocarya Cooperi*.

**E. CRYPTANTHUM** DC 10:129. P 1:111 as *Cryptanthus glomerata*.

**E. KOLOPTERUM** G. P 1:58 as *Oreocarya h*.

**E. INTERMEDIUM** G 17:225. A 1:206 as *Cryptanthus l*.

**E. JAMESII** T, Marcy r 294; bot Mex bound 140. P 1:57 as *Oreocarya suffruticosa*.

**E. MOLLE** G 18:89. P 1:20 as *Allocarya mollis*.

**E. RACEMOSUM** DC. P 1:115 as *Cryptanthus ramosa*.

**E. ULIGINOSUM** Phil. P 1:15 as *Allocarya uliginosa*.

**E. VIRGATUM** Porter, Hayden r 1870. 479. P 1:58 as *Oreocarya v*.

**EROPHILA** DC syst 2:356 (1821).

**E. VERNA** E Mey ex G arcke, Fl Deutsch ed 4, 35. IK as *vulgaris*. P 4:204 as type of *Draba*.

#### Genus *ERODIUM* L'Herit.

L'Herit, Geran t 1 ad 6 (1787).

Herbs with mostly jointed nodes, opp or alt stipulate lvs, and axyl umbellate nearly regular fls: sep 5, imbricated; pet 5, hypogynous, imbricated, the 2 upper slightly sm'er; glands 5: anth-bearing sta 5, with slightly dilated fil alt with as many sterile fil; sty becoming spirally coiled after splitting away, pubescent on inner face; carpels closed.

**E. BOTEYS** Bertol Amoén Ltal 35. Eu. E 1:95. Z 2:128. P 200.

Lvs oblig, pinnatifid; lobes dentate, obtuse; stipules sm: sep 4" lg: beaks of carpels 2-3" lg.

**ERODIUM CICUTARIUM** L'Herit.

Type locality: European.

Ait, Hort Kew ed 1, 2:414 (1789). B 1:94. Ab 228. Br 1:208. Rosa. P 1:86. Mig. Par 200 t. Greene Cal ac b 2:392. Cruz. Da 3. Er 1:58. LA Co. Parish, Z 1:8. Guad. Magdalena Isl.

Hairy, much branched from base: lvs pinnate, lfts laciniate pinnatifid with nar acute lobes; stipules sm: ped exceeding lvs, bearing a 4-8-fld umbel; sep 1-3" lg, acute; pet bright p: tails of carpels 1-2" lg: pedicels slender, at length reflexed, fr still erect; fil not toothed. Thru Cal; NM; Mex; So Am. Alfilaria.

*Geranium cicutarium* L, Sp Pl 2:680 (1753).

**ERODIUM MACROPHYLLUM** H. & A. H & A bot Beech 327. Ab 228. Da 4. B 1:95. Br 1:202. Cruz. Baja!

Mostly nearly or quite acaulescent, tomentose with copious interspersed lg glandular hairs at least on pedicels; lvs triangular-ovate or reniform, crenate-serrate, sometimes crenately-lobed; ped exceeding lvs, accrescent, at length 1 cm lg; pet equaling the sep, dull w; carpel clavate, densely velvety-pubescent; sds smooth. Sacramento vale to SD.

**ERODIUM MOSCHATUM** L'Herit.

Willd. sp pl 3:631. B 1:95. Ab 228. Da 4. Parish, Z 1:8. Par 200. P 1:86. Mig. Greene, Cal ac b 2:392. Cruz. Guad.

Lvs pinnate; the oblong-ovate lfts unequally and doubly serrate; stipules conspicuous; pedicels mostly sh and stout; sep 3-4 li long; odor musky. LA. SD. Eu.

**ERODIUM TEXANUM** A. Gray.

G. Pl Lindl 157. B 1:95. SD! Calmalli! Tex.

Pubescence appressed, not glandular: lvs ovate-cordate, sm, deeply lobed, 1" lg: ped sh sep nar, 3-5" lg; carpels nar, with the slender beak 1½-3" lg.

**ERYNGIUM** L, sp pl 1:232 (1753). A 1:138d.

**E. ARMATUM** C & R, bot gaz 13:141. W 5:19. A 1:138d.

**E. ARISTULATUM** Jepson.

"Prostrate, very slender, sts 10-16' in length: radicle lvs lg petioled, sh blade spinose-toothed and with a few lanceolate seg; cauline lvs opp, sessile, spinulose-serrate: rds very num, 3" in diam: bracts exceeding hd, about 5" lg, spinose at base; bractlets spinose, the body narly lanceolate, inversely sagittate-winged from base upwards, lobes of wings thus forming sinuses in each of which are borne 1-3 awns, surpassing breadth of wing: cx-lobes hyaline-margined, cuspidate, exceeded by the lg sty."—Jepson, Er 1:62-3. Lake Co. Cal.

**E. ARTICULATUM** Hook Lond J bot 6: 232 (1847). B 1:255 as *petiolatum*. Jepson. Er 1:63. Idaho.

**E. PARISHII** C & R. A 1:139 fdr. Ab 280.

**E. PETIOLATUM** Hook, Fl 1:259. B 1:255. Z 2:353 SF. Ore. A 1:139.

Variety **ARMATUM** Wat B 1:125. A 1:138 as *armatum*.

Variety **JUNCIPOLIUM** G 8:385. A 1:139 as typical.

**E. VASEYI** C & R, bot gaz 13:142. W 5:19.

Sts 2.5-4 dm hi, several from a com

rt and diffusely branching; lvs oblanceolate, unequally spinulose-serrate, attenuate below, bracts and bractlets similar, nar, thick, rigid, spinose and spiny-toothed, divergent, 12-15 mm lg, forming a spinose burr-like hd; fr with ovate-oblanceolate cuspidate-acuminate ex-lobes sh'ier than sty. Monterey Co, Cal.

**ERYSIMUM** L, Syst ed 1 (1735). A 1: 122d.

**E. ALPESTRE** Rydb Torr cl b 28:277 (1901). M 1:144 as *Cheiranthus alpestris*. **E. AMMOFILUM** M 1:51. Monterey Co, Cal.

**E. ARENICOLA** Wat 26:124. P 3:131 as *Cheiranthus a.*

**E. ARKANSANUM** Nutt, T & G Fl 1: 95. P 3:135 as *Cheiranthus arkanianus*.

**E. ASPERUM** DC syst 2:506. Hook Fl 1:64 t 22. Br 1:201 Cruz. Da 2. B 1:39. Par 136. A 1:123. P 1:133 as *Cheiranthus asper*.

Variety **ALPESTRE** Ckl, Torr cl b 18: 168. M 1:144 as *Cheiranthus alpestris*.

**E. CALIFORNICUM** Greene, Er 3:69. A 1:123 as *asperum*.

**E. CAPITATUM** Greene, Fl Fr 269. P 1:131 as *Cheiranthus capitatus*.

**E. CHEIRANTHOIDES** L, sp pl 661. P 1:138 as *Cheiranthus turritoides* Lam.

**E. ELATUM** Nutt, T & G Fl 1:95. P 1:135 as *Cheiranthus elatus*.

**E. GLABERRIMUM** H & A, bot Beech 323. B 1:41 as *Sisymbrium junceum* Bebb. P 3:127 as *Schoenocrambe linifolia*.

**E. GRANDIFLORUM** Nutt, T & G Fl 1: 96. Par 136 t. B 1:36 as *Cheiranthus asper*. P 3:131 as *Cheiranthus capitatus*. M 1:145 as *Cheiranthus grandiflorus*.

Type locality: "Sand hills of Point Pinos, in the vicinity of Monterey, Upper Cal."

**E. INCONSPICUUM** Mac M, Metas p 268. P 3:134 as *Cheiranthus inconspicuus*.

**ERYSIMUM INSULARE** Greene. Torr cl b 13:218. P 1:85 Mig. A 1:96 fdr. Br 1:207 Rosa. P 1:131 as *Cheiranthus insularis*.

**E. LINIFOLIUM** Jones, Cal ac pr, sr 2, 5:622. P 3:127 as *Schoenocrambe linifolia*.

**E. OCCIDENTALE** Rob, Syn Fl 1:144. P 3:132 as *Cheiranthus occidentalis* (Wat 23:261). Ore. Wash.

**E. OFFICINALE** L sp pl 660. = *Sisymbrium officinale* fide IK (A 1:123, 124 as same).

According to Greene (P 3:130) this is the type of the genus *Erisimum*, and the only sp yet known. Ab 169.

**E. OBLANCEOLATUM** Rydb. Torr cl b 31:557. M 1:144 as *Cheiranthus oblanceolatus*.

**E. PARVIFLORUM** Nutt, T & G Fl 1: 95 not Pers. P 3:134 as *Cheiranthus inconspicuus*.

**E. NEVADENSE** M 1:52. Nevada Co, Cal.

**E. RADICATUM** Rydb, Torr cl b 31:558. M 1:144 as *Cheiranthus radicans*.

**E. PINNATUM** Walter. A 1:124 as *Sisymbrium pinnatum*.

**E. PUBERULUM** Nutt, T & G Fl 1:95. B 1:39. P 3:133 as probably *Cheiranthus*

*asperillum*.

**E. SYRTICOLA** Sheldon, Torr cl b 20: 285. P 3:136 as *Cheiranthus syrticola*.

**E. WHEELERI** Rothr, Wheeler's R 6: 64. P 1:135 as *Cheiranthus Wheeleri*.

Genus **ERYTHEA** S. Watson.

**ERYTHEA ARMATA** Watson.

B 2:212, 485. A 1:346d.

**ERYTHEA EDULIS** Watson.

B 2:212. Greene, Cal ac b 1:227. Guad.

Genus **ERYTHRAEA** Pers.

Renealm ex Borek in Roem arch 1 (1): 28 (1796).

Herbs, mostly ann or bien, with sessile or amplexicaul lvs, and pink or y fls in cymes or spks: tubular, 4-15-lobed or 4-5-divided, the lobes keeled: cor salverform, 4-5-lobed, lobes spreading, contorted, convolute in bud: sta 4-5, inserted on base of cor-tube; fil sn, filiform; anth linear or oblg, becoming spirally twisted: ova 1-celled, the placentae sometimes intruded: sty filiform; stig 2-lobed: cap oblg-ovoid or fusiform, 2-valved: sd-coat reticulated. Canchalagua of the native Californians.

**E. CHIRONOIDES** G B 1:479. Mex. (of T, in bot Mex bound 156 t 42 = *venusta* fide B 1:479).

**ERYTHRAEA DOUGLASII** A. Gray.

G 1:480. Br 1:214. Rosa. Greene, Cal ac b 2:407. Cruz. Bloch, Er 2:40. Canchalagua, notes medicinal value. A 1: 201 fdr. Ore. Idaho. Ut. SD! Baja!

*Erythraea tenella* Uttall, ms, Gray, Bot Cal 1:480.

*Erythraea elata* Nuttall, ms, Gray, Bot Cal 1:480.

*Erythraea Nuttallii* Watson, Bot King Exp 276, in part.

*Erythraea exaltata* Coville, CNH, 4:150, Panamint mts.

*Cicendia exaltata* Grisebach, in Hooker, Fl Bor Am 2:69 (1838), wrongly characterized fide Gray.

Type locality: between the Kettle Falls and Narrows, of the Columbia river, N. W. C."

Oregon; Idaho; Utah; Baja!

**E. ELATA** Nutt. G B 1:480 as *E. Douglasii*.

**E. EXALTATA** Cov 150, 251, based on *cicendia exaltata* Hook Fl 2:63 t 157. (1838). A 1:202 as *E. Douglasii*.

**E. FLOERISUNDA** Bth 322. B 1:480. Or. Fl So & Low Cal 7 = *E. Douglasii* fide Parish Z 5:116.

**ERYTHRAEA MUHLENBERGII** Griseb. Grisebach, Gen e. sp Gent 146. B 1:480. Z 2:364. Bth 322. SF; Baja (Br).

**E. NUTTALLII** Wat, bot king 276 t 29 (in part = *E. Douglasii* fide B 1:480). A 1:201 s. Cov 150, 239. Nev. Idaho. Ut.

**E. RAMOSISSIMA** Pers, syn 1:283. Eu. Asia. B 1:480. Pa.

**E. SPICIOSA** G, B 1:479. Mex.

**E. TENELLA** Nutt. B 1:480 as a dwarf state of *E. Douglasii*. A 1:201 s.

**E. TRICANTHA** Grisebach Gent 146. B 1:479. 2:464. Jepson, Er 1:12. Parish, Z 5:116 (as probably not Cat).

**E. VENUSTA** G, B 1:479. Cov 150. A 1: 344d. Par 224 t. Or, W 5:12. Ha 102. Ab 304. Da 11. Z 2:165.



**ERYTHRINA CRISTI—GALLI Linn.**

- ERYTHROCOMA** Gifts 1:175.  
**E: AFFINIS** Gifts 1:175 Alberta.  
**E: ALIENA** Gifts 1:179. Chlh.  
**E: ARIZONICA** Gifts 1:179. Ar.  
**E: AUSTRALIS** Gifts 1:176. Colo.  
**E: BREVIFOLIA** Gifts 1:176. Ut.  
**E: CAMPANULATA** Gifts 1:178. Wash.  
**E: CANESCENS** Gifts 1:178.

"Stouter than *E: campanulata*, sometimes taller; lvs as sh, broader, canescently soft—villous and sparsely pilose; lfts obovate-cuneate, with 3-5 seg or teeth mostly broad, oval, obtuse but with sm abrupt cusp-like termination: sts mostly 3-fld: cx-tube very sh, bractlets sm, com  $\frac{1}{2}$  as lg as the ovate-lanceolate seg; pet obovate-spatulate: plume hardly more than 1' lg."—Gifts 1:178. Northern Sierra Nevada, Cal. Ore?

- E: CILIATA** Gifts 1:177 based on Geum c (Pursh). Colo; Wyo; Mont.  
 Variety **ORNATA** Gifts 1:178. Wash.  
**E: CINERASCENS** Gifts 1:175. SDak.  
**E: DISSECTA** Gifts 1:177. Colo.  
**E: FLAVULA** Gifts 1:177. Wyo.  
**E: GRISEA** Gifts 1:178. Ar.  
**E: TRIDENTATA** Gifts 1:179. Ar.  
**E: TRIFLORA** Gifts 1:175 based on Geum t (Pursh). Ill; Wis; Minn; N & S Dak.

**Genus ERYTHRONIUM Linnaeus.**

- ERYTHRONIUM ALBIDUM** Nutt.  
**ERYTHRONIUM AMERICANUM** Kr-GM  
**ERYTHRONIUM CALIFORNICUM**.  
**ERYTHRONIUM CITRINUM**.  
**ERYTHRONIUM GIGANTEUM** Lindl.  
 rar 140 t. B 2:170 as  
**ERYTHRONIUM GRANDIFLORUM**  
 Pursh Par 142. Parry, Wyo 15. Br Colo  
 28. B 2:170. 171s.  
**ERYTHRONIUM HARTWEGII** S. Wat.  
 B 2:170.  
**ERYTHRONIUM HOWELLII**.  
**ERYTHRONIUM MONTANUM**.  
**ERYTHRONIUM NUTTALLIANUM**  
**ERYTHRONIUM PROPULLANS** A. Gry  
**ERYTHRONIUM PURPURASCENS**  
 B 2:171. Z 2:166.  
**E. REVOLUTUM** B 2:170. 171 s.  
**ERIOPHYLLUM PRINGLEI** A. Gray.  
**ERIOPHYLLUM WALLACEI** A. Gray.  
**ERIOPHYLLUM LANOSUM** A. Gray.  
**ESCHSCHOLTZIA CALIFORNICA**  
 Cham. Ab, SCab 1:89, "Sierra Madre: Chatworth Park, LA Co, per."  
**E: PENINSULARIS** Greene. Ab, SCab  
 1:89, the com sp. LA Co, ann."  
**E: HYPECOIDES** Bth. Ab, SCab 1:89,  
 Saddle Peak, Monica mts.  
**E: STRICTA** P 5:215, 236d.  
**E: LEPTANDRA** P 1:170d et 5:215, 237.  
**E: CONFINIS** P 5:215, 237d.  
**E: KYLOREHIZA** P 5:215, 238d.  
**E: ANGULARIS** P 5:215, 238d.  
**E: ABSINTHIIFOLIA** P 5:215, 239d.  
**E: NITROPHILA** P 5:215, 240d.  
**E: PROCERA** P 5:215, 241d.  
**E: MACRANTHA** P 5:216, 242d.  
**E: SANCTABUM** P 5:216, 243d.  
**E: SCARIOSEA** P 5:216, 243d.  
**E: RIGIDA** P 5:216, 244d.  
**E: RECTA** P 5:216, 245d.  
**E: CALOSPERMA** P 5:216, 246d.  
**E: REVOLUTA** P 5:216, 247d.

**E. FLORIBUNDA** P 5:216, 247d.

- Variety **GORGONICA** P 5:247d.  
**ESCHSCHOLTZIA TENUISECTA** Greene  
**EUCALISIA** Gifts 1:82 based on Streptanthus sp.  
**E: ALBIDA** Gifts 1:83 (S: a P 1:62).  
**E: AMPLEXICAULIS** Gifts 1:84 (Caulanthus a, Wat 17:364).  
**E: ASPERA** Gifts 1:83 (S: a, P 3:225).  
**E: BAKERI** Gifts 1:84.

"Habit of *E: glandulosa*, and about as large, stouter, more sparsely hispidulous and hairs much sh'er; lvs and their teeth equally gland-tipped: cx sh'er, its sep less acute and less connivent, colored very dark and dull p; pet nar, also dark p save as to the w and strongly crisped nar margin: upper pair of sta exerted quite beyond pet, united to near summit by fil, their anth of less than 1-3d the size of the other 4, these last in very sh fil and borne scarcely beyond summit of cx."—Gifts 1:84. Near Bethany, on the plains of the upper San Joaquin, Cal.

- E: BIOLETTII** Gifts 1:83 (S:B, P 2: 225).  
**E: GLANDULOSA** Gifts 1:82 (S:g, Hook, Ic.) Type of genus.  
**E: HISPIDA** Gifts 1:83 (S: h, G 6:184).  
**E: MILDREDAE** Gifts 1:83 (S: M, Greene, Fl Fr 260).  
**E: NIGRA** Gifts 1:83 (S: niger, Greene, T cl b 13:141).  
**E: ELATICE** Gifts 1:84.

"Stout ann, erect, branched above, com 2° hi: lowest lvs 2-4' lg, laciniately lobed or pinnatifid, lobes not gland-tipped, both faces of lf as well as base of st hispid, not even the nar auriculate-clasping cauline ones glab, but these merely dentate: racemes lax: bilabiate cx and cor r-p; upper pair of fil united to above middle, their anth much reduced; pod 3' lg ascending, straight or slightly curved upwards."—Gifts 1:84. Santa Lucia mts, Cal.

- E: PULCHELLA** Gifts 1:83 (S: p, P 2: 225).  
**E: SECUNDA** Gifts 1:83 (S: s, Greene, Fl Fr 261).  
**E: VERSICOLOR** Gifts 1:83 (S: v, Greene, Er 3:99).  
**EUCALISIA VIOLACEA** Greene.

"Doubtless ann and larger," perhaps 2° hi or more, but only upper lvs and fig branches known, lobes perfectly glab, glaucescent; lvs lance-linear and sagittate-clasping, remotely dentate: racemes several, slender, fls slenderly pedicellate: cx bilabiate, the 3 upper sep convicent together at tip, obtusely keeled, of a rich vio or r-p; cor as strongly bilabiate, the large upper pet with w-margined and rather wide limb, cor otherwise like cx as to color: sta in 3 very unequal pairs; upper pair of fil completely united and anth greatly reduced: pods 3' lg or more, straight, ascending, very nar."—Gifts 1:83. Middle Cal.

**Genus EUCNIDE Zuccarini.**

Cx-tube oblg; limb 5-lobed, persistent: pet 5, united at base and inserted on ex-throat: sta num: fil filiform, adnate to pet-base, decid with them in a ring: ova sh-conical at summit, 1-celled: sty

5-angled, 5-cleft, lobes oft twisted: ovules very num, covering the 5 prominent expanded placentae: cap obovate, very many-seeded, opening by 5 valves at the sh-conical summit: sds minute, longitudinally striate. Ann or blen herbs, armed with stinging hairs and barbed pubescence; lvs alt, cordate or ovate, petioled, lobed and serrately toothed; fls y, pedicelled, in terminal cymes.

Treated by Bentham & Hooker as a section of *Mentzelia*.

**EUCNIDE CORDATA** Kellogg.

*Mentzelia cordata* Kell Cal ac pr 2:33; *Hesperian* O 1860 with col plate. Baja.

**EUCNIDE URENS** Parry.

Parry, *Am nat* 9:144 (1875). B 1:237.

Stout, low, very hairy and pubescent: lvs broadly ovate, 1-2" lg, cordate or rounded at base, obscurely lobed, coarsely toothed, the upper sessile, the lower on rather sh petioles: fls large, on pedicels 3-6" lg in terminal cracteolate cymes: cx-lobes lanceolate, 6-10" lg, pet twice longer, broadly spatulate, abruptly acuminate, hairy at apex, united at base into a tube 3" lg: fl equalling cx-lobes: sty stout, cleft to middle: cap broadly obovoid, ½' long, opening by 5 erect valves as in the other species; sds num, linear-oblong, a fifth li lg, marked by longitudinal striae.

*Mentzelia urens* Parry, in hb, G 10:71 (1874).

Type locality: "rocky ravines of the Colorado near the confluence of Williams river," and "near St. George, Southern Utah."

Utah, Santa Maria, Baja Cal (Br).

Genus **EUCRYPTA** Nuttall

Erect paniculately branched viscid ann, with sm racemose fls: cx 5-parted, sinuses naked: cor sm, tubular-campanulate, appendages 0: cap globose, 1-celled, with 2 dilated placentae lining pericarp, 2-valved, 8-seeded, 2 sds remaining in each valve between the pericarp and the placentae after dehiscence: sds corrugated or smooth.

Nutt, *Phil ac J*, ns, 1:158 (1847). = *Ellisia* fide IK.

**E. CHRYSANTHEMIFOLIA** Greene, *Cal ac* b 1:200 based on *Ellisia* c. Ab 321.

Baja. Greene, *Cal ac* b 2:407 Cruz. P 1:91 Mig.

**E. POLIOSA** Nutt, *Gamb* 159. B 1:505 as *Ellisia chrysanthemifolia*.

**E. MEMBRANACEA** Bth. Quintin (Palmer). SF.

**E. PANICULATA** Nutt, DC 9:292 Greene, *Cal ac* b 1:200. B 1:505 as *Ellisia chrysanthemifolia*.

**E. UIOPHUS PARISHII** C. & R.

One-2° hi: lvs ternate, on petioles 2-4' lg, with linear-lanceolate lflets 1-3' lg 2-5" wide, terminal lflets more or less distant: uppermost lvs simple: umbel 8-10-rayed, with scanty inv or 0, and involucrels of 2-6 narly lanceolate bractlets 2" lg: rays ½-1' lg; pedicels 2-4" lg: fr ovate or oblong, 1½-2" lg, ½" broad: oil-tubes 2-4 in the intervals, 6 on the commissural side."—C-R 112 f 124. Ha 98. Sber mts, Jac (Parish).

*Pimpinella Parishii* C. & R, bot gaz 12:

157.

Genus **EUNONYMUS** Tournefort.

Sep and pet 4 or 5, widely spreading: sta as many, very sh, on a broad angled disk: ova immersed in the disk, 3-5-celled: sty sh or 0: cap 3-5-lobed and 3-5-valved, loculicidal, coriaceous, colored, oft warty: sds 1-4 in each cell, covered with a fleshy r aril. Shrubs, with 4-angled branches, opp petioled serrate glab lvs, and fls in loose cymes on ax peds.

**E. ATROPURPUREUS** Jacq, Hort Vin- dol 2:55. (Hook Fl 1:119 = *occidentalis* fide B 1:98).

**E. OCCIDENTALIS** Nutt, ex T, Pac Ry R 4:74. B 1:98. 2:438.

**EUNONYMUS PARISHII** Trelease.

"weak shrub, 8-10" hi; ends of twigs flattened; buds 6-10 mm lg; lvs glab, elliptical-ovate, finely crenate serrulate, obtuse or blunt-pointed, abruptly contracted and cuneate at base; ped 2 lg 3-7-flid; fls about 6 mm in expanse; otherwise similar to *E. occidentalis*. (S. B. & W. F. Parish, No. 957)."—Trelease, *St Louis ac tr* 5:354 (1899). Ha 93. Burning bush, Spindle tree. Smith mt, SD Co (H. C. Orcutt).

Genus **EUPATORIUM** Tournefort.

**E. ABORIGINUM** P 4:277.

**E. AGERATOIDES** P 4:275, 278

**E. ANGUSTATUM** P 4:277.

**E. ARIZONICUM** P 4:280.

**E. AROMATICUM** P 4:275, 279.

**E. CANNABINUM** C. Bauhin (1623).

Greene, *Er* 1:42. P 4:243.

**E. CEANOTHIFOLIUM** P 4:275.

**E. CORDATUM** P 4:275.

**E. EUNYMFOLIUM** P 3:31.

**E. EURYBIAEFOLIUM** P 4:275.

**E. FRASERI** P 4:275.

**E. GRANDIFLORUM** Hook Fl 2:26.

Greene, *Er* 1:53.

**E. HYSSOPIFOLIUM** P 3:177.

**E. INCISUM** P 3:180 S.

**E. JUCUNDUM** P 3:180.

**E. KAEILLIAEFOLIUM** P 3:31.

**E. NEMORALE** P 4:278.

**E. OCCIDENTALE** B 1:299.

**E. ODOREATUM** P 4:275

**EUPATORIUM PASADENENSIS** Parish

**E. SAGITTATUM** G. B 1:299.

**E. TRACYI** P 4:275.

**E. URTICAEFOLIUM** P 4:275.

**E. VIBURNIFOLIUM** P 4:276.

Genus **EURYPTERA** Nuttall.

T & G Fl 1:629; = *Peucedanum* fide IK. A 1:274d.

**E. HASSEI** C & R. Ab 291, Sierra Madre canyon (Hasse).

Cauliscent, stout, 6 dm hi or more, glab and somewhat glau, from a lg slender woody rt; lvs biternate on very long petioles (sometimes 2.5 dm, including petiole); lflets broadly ovate with cuneate base, irr lobed, coarsely mucronate-toothed, 2.5-10 cm lg, becoming 6 cm broad; umbel long-peduncled, equally 8-18-rayed; bractlets varying from rather short linear-setaceous to oblanceolate, foliaceous, entire or toothed and much exceeding the pedicels; rays 5-10 cm lg; pedicels 12-16 mm



lg.

**EURYPTERA LUCIDA** Nutt.

Nuttall, T &amp; G, Fl 1:629.

Abrams, Fl LA 290.

Pt. Loma, SD! Baja Arizona.

A 1:275d. B 1:269 as *Peucedanum* Euryptera. T. bot Mex bound 70 t 27.Genus **EUTHAMIA** Cass.

Erect, glab, per, very lfy more or less distinctly corymbose branched herbs, with nar entire pellucid-punctate lvs, and sm hds clustered at ends of the branches: inv bracts firm, imbricated, glutinous: ray fls about twice as many as disk fls, all permanently y: ak sh, turbinate, villous pubescent.

Ell. sketch 2:391 in syn (1824)=*Solidago* fide IK.**E. CAMPORUM** P 5:74.**E. CAEOLINIANA** Greene, Torr cl mem 5:321. P 5:76.**E. CHRYSATHAMNOIDES** P 5:76.**E. GRAMINIFOLIA** Nutt Gen 2:162. P 5:72. = *S. lanceolata* fide IK.**E. GYMNOSPERMOIDES** P 5:75.**E. FLORIBUNDE** P 5:74.**E. MEDIA** P 5:74.**E. MICEOCEPHALA** P 5:79.**E. MICROPHYLLA** P 5:79.**E. MINOE** P 5:78.**E. NUTTALLII** P 5:73.**EUTHAMIA OCCIDENTALIS** Nuttall.

Somewhat paniculately branching, 1-2 m hi; lvs lanceolate-linear, obscurely 3-nerved: inv bracts linear-lanceolate, acute; rays 16-30; disk-fls 8-14, their sty tips obtuse.

Ab 397.—"Frequent in low ground and along streams in our valleys and foothills. A-N." = *Solidago occidentalis* fide IK.

**E. PULVERULENTA** P 5:75.**E. REMOTA** P 5:78.**E. SCABRA** P 5:80.**E. TENUIFOLIA** Ell. Sketch 2:392 in syn. P 5:77. = *S. tenuifolia* fide IK.**EUSTOMA EXALTATUM** Griseb.

Sber Co (Parish 431); Cantilles! son, Er 1:10, 12.

Genus **EUPHORBIA** Linnaeus.**EUPHORBIA MELANADENIA** T, Pac Ry R 4:135 (1857).

Type locality: "low or wet places near San Gabriel, Cal, 22 Mr 1854."

Synonymy (fide Ab, SCA b 1:68):—*E. cinerascens* var: *appendiculata* E et *E. polycarpa vestita* Wat, B 2:73.

**EVAX ACAULIS** Greene.

"Stout and low, the very sh branches horizontal: lvs with sh blade and greatly elongated petiole: hd glomerate at ends of all the branches, none in the axils. Moist plains near Antioch, and southward. Ap-Je."—Greene, Man 184.

**EVAX INVOLUCRATA** Greene.

"Stout, strictly erect, simple, or rarely with 1 or more ascending lg branches from base, 8' hi or more; hds only in a terminal hemispherical cluster ¾' broad, surrounded by a conspicuous whorl of 15 or 20 lvs, these with spatulate-obovate cuspidate blade ½' lg, only a third of the length of the slender petiole, this abruptly dilated at base to half the width of blade; cauline lvs shorter and nar-er. Plains of the lower Sacramento;

collected only by the author. My."—Greene, Man 185.

= *Psilocarphus caulescens* Bth fide IK**EVOLVULUS.****E: OROPHILUS** Gifts 1:151. NM.**ELYMUS ORCUTTIANUS** Vasey.**ELYMUS PARISHII** Davy & Merrill.Genus **FAGONIA** Linnaeus.**FAGONIA CALIFORNICA** Benth.**FRANCA** Michel. = *Frankenia* fide IK.**F: GRANDIFOLIA** Greene, Man 38. = *Frankenia* g.**GAERTNERIA** Medic Phil bot 1:45 (1789). = *Franseria* fide IK.**G. ACANTHICAERPA** Britton. Ab 413.**G. BIPINNATIFIDA** OK. Ab 413.**G. TENUIFOLIA** OK. Ab 412.Genus **GAILLARDIA** Fougereux.

Fouger, Ac Sc Par mem, 1786: 5 t 1-2 (1788).

**G. ACAULIS** G 10:73. B 1:392.**G. ARISTATA** Pursh Fl 2:573. B 1:392.**G. PINNATIFIDA** T, NY Lyc ann 2: 214. B 1:392.**G. FALIGIATA** P 5:57.**G. LUTEA** P 5:57.Genus **GALIUM** Linnaeus.

L, Gen ed 1, 24 (1737).

Bedstraw. Ann or per herbs or rarely suffrutescent, with 4-angled slender sts and branches, apparently verticillate lvs, and sm w, g, y, or p fls, mostly in axy or terminal cymes or panicles: fls perfect or rarely dioe: ex-tube ovoid or globose, limb minutely toothed or o: cor rotate, 4-lobed: sta 4, alt with cor-lobes; fii sh: ova 2-celled; ovules 1 in each cavity: sty 2, sh; stlg capitate: fr biglobular, dry or fleshy, smooth, tuberculate or hispid, separating into 2 indehiscent carpels.

**G. ACUTISSIMUM** G 7:350.B 1:286 as *stellatum*.**G. ANDREWSII** G 6:537. B 1:286. Da 8. Er 1:12. Ab 379. A 1:177d.**G. ANGULOSUM** G 11:74. B 2:453. Guad? A 1:54 fdr. Z 1:112, 138.

**G. ANGUSTIFOLIUM** Nutt, T & G Fl 2:22. Par 30. P 1:203 Cedros. Greene, Cal ac b 2:400 Cruz. Br 1:211 Rosa. Ab 378. B 2:285. Da 8. A 1:178d.

**GALIUM APARINE** L.

Greene Cal ac b 2:400 Cruz. Br 1:211 Rosa, Da 8. B 1:284. A 1:141d. Par 30.

Variety **VALLANTII** Koch. A 1:141.**G. ASPERRIMUM** G, Pl Fendl 60. B 1:284. NM. Ar (Wat, bot King 134 = variety *asperulum* fide B 1:284).Variety **ASPERULUM** B 1:284. Nev.**G. BIFOLIUM** Wat, bot King 134 t 14. B 1:283.**G. BLOOMERI** G 6:538. B 1:285. = *multiflorum* fide IK.Variety **HIRSUMUM** G, B 1:285. Sierra valley, Cal (Lemmon).**G. ECLANDERI** G 7:350. B 1:284. 2:453.**G. BOREALE** L, sp pl 108. B 1:285. Ore.**G. ERANDEGEI** Z 2:230.**G. BUXIFOLIUM** Greene, Cal ac b 2: 150, 400 Cruz. P 1:88 Mig. Br Z 1:112 as *Catalinense*.**G. CALIFORNICUM** H & A, bot Beech 349. Ab 379. Z 1:138. A 1:178. B 1:283.2:452. Br, 1:225 (cites *flaccidum* as a synonym).

**GALIUM CATALINENSE** A. Gray.**GALIUM CULBERTSONII** Greene.

"Rigid herbaceous per, with, nearly simple st about 1' hi from horizontal subliguous rdstocks at least partly subterranean; angles of st as well as margin and midvein of lvs, minutely villous-hispid, a more minute and partly appressed pubescence between angles of st: lvs in 4's, of firm texture, less than ½' lg, oval, but ending in a very prominent cusp: fls few, minute, g'ish: frs (Minature) apparently baccate, on deflexed pedicels of ¼-½' lg, to the unaided eye appearing glab, but under a lens seen to be sparsely and minutely hispidulous-hairy."—Gifts 1:80. south fork of the Kaweah river, Tulare Co, Cal, J: D: Culbertson.

**GALIUM FLACCIDUM** Greene.

Cal ac b 2:400 Cruz. P 1:34. A 1:55 fdr. Z 1:138 as Californicum.

**GALIUM GRANDE** McClatchie.

A 1:55 fdr. Ab 379.

**G. HYPOTRICHUM** G 5:538. B 1:286 as multiflorum.**G. MARGARICOCUM** G 13:371. B 2: 453 as terrie form of Bolanderi.**G. MATTHEWSII** G, 19:80. Cov 118.**GALIUM MIGUELENSE** Greene.

P 1:34, 88 Mig. A 1:55 fdr, 178 as Nuttallii (fide Z 1:138).

**G. MULTIFLORUM** K 2:94. Cur 1:138. Cov 118. Ha 121. B 1:285. A 1:142.Variety **PARVIFLORUM** Parish. A 1:42 fdr.**G. NUTTALLII** G, Pl Wright 1:80. Br 1:203 Cruz, 211 Rosa (cites Miguelese as a synonym). Par 31. Ab 379. Da 8.

B 1:283. Z 1:138. A 1:178d.

**GALIUM OCCIDENTALE** McClatchie.

A 1:55 fdr.

**GALIUM PUBENS** A. Gray.

B 1:285. Z 453.

Baja! to Yosemite valley.

**GALIUM ROTHROCKII** A. Gray.

Cantilles mts! Arizona.

**GALIUM SICCATUM** Wright.

A 1:56 fdr. Ab 378.

**GALIUM SPURIUM** Linn.

Da 8. Er 1:59 LA Co.

**GALIUM STELLATUM** Kellogg.

Calamujuet, Baja (Br); SD Co! Utah; Arizona.

K 2:94. B 1:286. Cur 1:138. Cov 118, Panamint mts.

**G. SUFFRUTICOSUM** Nutt. B 1:283 et. A 1:178 as Nuttallii.**G. TACTORIUM** L, sp pl 106. A 1:141.

= trindum fide IK.

Variety **DIVERSIFOLIUM** Wright. A 1: 142 fdr.Variety **SUBMONTANUM** Wright. A 1: 141 fdr.**G. TRICHOCARPUM** DC, Prod 4:600. B 1:285.**G. TRIFIDUM** L, sp pl 105. B 1:284. A 1:178.Variety **PUSILLUM** G. A 1:178.Variety **SUBEIFLORUM** Wiegand. A 1: 178d. Ab 378.**G. TRIFLORUM** Michx Fl 1:80 (1803). B 1:284. Cov 118, valley of the Kaweah river, Alk. Japan. Ala. So Cal (Parish).

**G. WRIGHTII** G, Pl Wright 1:80. Parish, Er 7:97, San Antonio mts, 7000'

alt (McClatchie).

**GALVEZIA** [Galvezia Domb ex Juss Gen 119 (1789)].**G. FRUTICOSA** J. F. Gmel, Syst 937. Peru.**G. JUNCEA** G 22:311. P 1:206 Cedros.**G. LIMENSIS** Domb, ex Chav, mon Antirrh 180. B 1:551. = fruticosa fide IK.**GAMBELIA** Nutt, Phil ac J ns, 1:149 (1847).**G. SPECIOSA** Nutt, lc, t 22. B 1:551 et Br, Z 1:112 as Antirrhinum speciosum. Cat. Guad.**Genus GARRYA** Douglas.

Evergreen shrubs with 4-angled branchlets, opp entire coriaceous lvs, sh petioles connate at base, and dioe apetalous fls in axy aments, solitary or in 3's between the decussately connate bracts: cx of pist fls 4-parted, with linear valvate seg: sta 4, with distinct fil: disk and ova 0: stam fls with cx-limb shly 2-lobed or obsolete: disk and sta 0: ova 1-celled: ovules 2: sty 2, stigmatic on the inner side, persistent: berry ovoid, 1-2-seeded. Silk-tassel tree. **G. BUXIFOLIA** G 7:349. B 1:276. Z 1:94 as probably fremontii.

**G. ELLIPTICA** Lindl, bot reg t 1686. B 1:276. Z 2:355. Par 376 t.**G. FLAVESCENS** Wat Am nat 7:301. A 1:191 fdr. B 1:276.

Variety **PALMERI** Wat. A 1:191. Ab 294 as Veatchii var. Palmeri.

**GARRYA FREMONTII** Torr.

Jac (Hall 99). Jepson, Erythra 1:12.

T. Pac Ry R 4:136. Par 376. C & E, bot gaz 15:95. Z 1:94 (as Veatchii -), 2:

157. B 1:276. Z 2:452.

**G. LINDHEIMERI** T Pac Ry R 4:136. Z 1:94 as ovata.**G. OVATA** Bth 14. Mex.**G. PALLIDA** Eastwood. A 1:191d. Ab 294.**G. VEATCHII** K 5:40 (1873). C & E, bot gaz 15:95. Ha 100. McClatchie, Er 2:123, Echo mts, LA Co. Cur 1:138. P 1:203 Cedros. A 1:41d. Parish Z 5:73 Gabriel mts.

Variety **FLAVESCENS** Z 1:94 (G. flavescens Wat).

Variety **UNDULATA** Eastwood.

Lvs elliptic or elliptic-ovate, obtuse or aristate at apex, cuneate at base, margins undulate; fr densely clustered, concealing upper bracts; cx-teeth hidden in dense wool and some distance below base of sty. Ab 294, Mt Wilson and Mt Lowe.

Variety **PALMERI** Eastwood.

An erect, branching shrub, 18-25 dm hi; branchlets sparsely pubescent with close appressed silky hairs when young, becoming smooth with age; petioles sh. 2-6 mm lg; lvs coriaceous oval or oblong-ovate, slightly undulate or entire, acute at apex and aristate, rounded or cuneate at base, glab or nearly so above, densely tomentose beneath with matted hairs, 2.5-5 cm lg; bracts prominent, acute or acuminate, lower foliaceous; fr cuneate at base, lower sh-pedicelled, densely silky, becoming glabrate; cx-teeth prominent and close to base of sty. Ab 294. Cuyamaca.

**G. WRIGHTII** T, Pac Ry R 4:136.



**GAULTHERIA** Kalm ex L, Diss Chen 20 (1751).  
**G. MYRSINITES** Hook, Fl 2:35. B 1:454. Parry, Wyo 18.  
**G. SHALLO** Pursh Fl 1:283 t 12. B 1:455. Par 49. Z 2:263.  
**GAURA** L, Diss Chen 47 (1751).  
**G. HETERANTHA** T, Pac Ry R. 4:87. B 1:234 as *Heterogaura* Californica.  
**G. PARVIFLORA** Dougl, Hook Fl 1:208. B 1:234. Baja.  
**GAYOPHYTUM** A Juss in Ann Sc nat 35:18 t 4 (1832). A 1:334d.  
**G. CAESIUM** T & G Fl 1:514. B 1:221 as racemosum.  
**GAYOPHYTUM DIFFUSUM** T. & G. T & G Fl 1:513. B 1:221. Da 6.  
**GAYOPHYTUM LASIOSPERMUM** Greene A 1:39 fdr. Ha 97. Trelease, Mo bot gard r 5:109 t 17.  
**G. NUTTALLII** T & G Fl 1:514. B 1:221. = racemosum fide IK.  
**GAYOPHYTUM PUMILUM** S. Watson. Wat 18:193. Ha 97. Ab 273. Bear. Trelease, Mo bot gard r 5:114 t 22.  
**G. RACEMOSUM** T & G Fl 1:514. B 1:221.  
**G. RAMOSISSIMUM** T & G Fl 1:513. B 1:221. Z 2:162. Ab 272. A 1:334d.  
**G. STRICTUM** G 7:340. B 1:233 as *Boisduvalia Torreyi* (= *oenothera* T fide IK).  
**GENTIANA** Tourn ex L syst ed 1 (1755).  
**G. ACUTA** Michx Fl 1:177. B 1:481 as *amarella* var: *acuta*.  
**G. AFFINIS** Griseb, Gen 289. B 1:482 (G 8:398 = *sceptrum* var: *humilis* fide B 1:453).  
 Variety **OVATA** G, B 1:482 (2:462 as *Oregana* E).  
**G. AMARELLA** L, sp pl 230.  
 Variety **ACUTA** E, B 1:481 based on G: *acuta* Michx. (Sber mts, Parish 311).  
**G. ANTIOSEPALA** P 3:309.  
**G. BRACHYPETALA** Bunge, in Norev mem soc nat Mosc 1:225 t 11 f 3. B 1:481 as *serrata* = *detonsa* fide IK.  
**G. ERACTEOSA** P 4:180.  
**G. CALYCOSA** G, Pac Ry R 6:86. B 1:482, as *Newberryi*.  
**G. CALYCOSA** Griseb, Gen et sp Gent 292. Z 2:165. Par 336 t.  
**G. DETONSA** Rottb, Act Hafn 10:254 t 1 f 3. B 1:481 as *serrata*.  
 Parry, Wyo 16. IK as *valid* sp.  
**G. DISTEGIA** P 4:182.  
**G. DOUGLASIANA** Bong, Ac Petersb mem 2:156. P 3:81.  
**G. GLAUCA** Pall, Fl Ross 1 (2) 104 t 93 f 2. Sib.  
 Variety *Paulense* K 7:115. Cur 1:143 "not in herb."  
**G. HETEROSEPALA** E. St Louis ac tr 2:215 t 8. P 4:183.  
**G. HUMILIS** Stev, Mem sc nat Mosc 3: 258. Asia. Ckl W 6:11. Parry, Wyo 4, 7.  
**G. INTERRUPTA** P 4:182.  
**G. MENZIESII** Griseb, Gen 292. B 1:483 as *sceptrum* var: *humilis*. P 3:82.  
**G. NEWBERYI** G 11:84.  
 B 1:482. Z 2:165.  
**G. OREGANA** E ex G syn Fl 2 (1): 122. B 2:464.  
**G. PARRYI** E St Louis, ac tr 2:218 t 10. Nev. Colo. B 1:482. P 4:181.  
**G. REMOTA** P 4:182.

**G. SCEPTRUM** Griseb, Gen et sp Gent 293. B 1:483.  
 Variety **HUMILIS** E, B 1:483.  
**G. SEIIGERA** G 11:84.  
 B 1:482.  
**G. SIMPLEX** G, Pac Ry 5:87 t 16. B 1:481.  
**G. SERRATA** Gunner, Fl Norveg 2:101. B 1:481. Ckl W 6:11. = *detonsa* fide IK.  
**GEOTHALLUS**.  
**G. TUBEOSUS** Cambp, bot gaz (Ja 1896). SD Liverwort.  
**GERAZA** T & G, Am ac pr 1:48 (1847). = *Encelia* fide IK.  
**G. CANECENS** T & G, lc 49. B 1:351 as *Encelia eriocephala*.

#### Genus GERANIUM Linnaeus.

Herbs with stipulate, palmately lobed, cleft or divided lvs and axyl 1-2-fid peds; fls regular, 5-merous; sep imbricated; pet hypogynous, imbricated; sta 10, generally 5 shorter sty persistent, naked on inner surface, becoming recurved; carpel opening along inner face.  
**G. ALBIFLORUM** Hook Fl 1:116 t 40; bot mar t 3124. B 1:94 as *Richardsonii*. Variety? **INCISUM** T & G Fl 1:206. B 1:94 as sp.  
**GERANIUM CAESPITOSUM** James. NM. Ar Mts northern Baja (Or 924). Slender, diffusely branched, with sm broadly lobed lvs, finely pubescent. B 1:94. Z 2:112.  
**GERANIUM CAROLINIANUM** Linn.  
 More or less spreading, 15-30 cm high, loosely gray, pubescent and glandular; lvs incisely 3-5-parted, 3-5 cm broad; seg cuneate, more or less deeply toothed or dissected; peds 2-fid, about 2 cm lg; pet rose-p, 4-5 mm broad; beak of fr villous or glandular; carpels villous-hispid, cm black; sd reticulate. British Am. SD!  
 B r 1:202. Cruz. B 1:94. Da 3. P 3:172. A b 227. Br Z 1:113 Cat.  
**G. ERIANTHUM** Lindl, bot reg 28: t 52. B 1:94 as *incisum*.  
**G. FREMONTII** T, ex G, Pl Fendl 26. Z 2:112.  
**G. INCISUM** Nutt, ex T & G Fl 1:20. Par 220. B 1:94. 2:438. Z 2:161.  
**G. LANGLOISII** P 3:171. La.  
**G. RICHARDSONI** F & M, Ind Sem Petrop 4:37 (1837). Hook Fl 1:116. Cov 76. B 1:94. Z 2:112. Ab 227.  
 Sts 3-6 dm hi, lvs thin, 5-12 cm broad, incisely 3-5-parted; fl 18-20 mm broad, w or lavender with rose-p veins.  
**GERARDIA** L, Gen ed 1, 181 (1737).  
**G. DECEMLoba** P 4:51.  
**G. HOLMIANA** P 4:52.  
**G. LANCEOLATA** P 4:101.  
**G. TENUIFOLIA** P 4:52, 101.  
**G. GALVESTANA** P 5:138.  
**G. FRUTICOSA** Pursh Fl 2:423 t 18. B 1:556 as *Pentstemon Menziesii*.  
**GEUM** L, syst ed 1 (1735).  
**G. ANEMONOIDES** Willd sp pl 2:1117. P 4:49 as *Sieversia* pentapetala.  
**G. AUKLANDICUM** P 4:225.  
**G. CALTHIFOLIUM** Sm in Rees Cyc 5 n 13. P 3:81 NM.  
**G. CILIATUM** Pursh Fl 1:352. P 4:50 as *Sieversia* c = *triflorum* fide IK.  
**G. GLACIALE** Fisch in mem Mosc 2: 187 t xl f 20 (1809). P 4:49 as *Sieversia*

glacialis.

**G. MACROPHYLLUM** Willd., En 557. B 1:176.**G. ROSSII** Seringe in DC 2:553. P 4:49 as *Sieversia* R.**G. ROTUNDIFOLIUM** Langsd, DC 2:15. as *Sieversia* t. B 1:176.**G. SCOPULORUM** P 4:148.**G. SERICEUM** P 3:172. 4:50 (as *Sieversia sericea*), 225. Nev. Mont.**G. STRICTUM** Soland in Alt Hort Kew ed 1, 2:217. P 4:148.**G. TRIFLORUM** Pursh, Fl 2:736. P 4:50 as *sieversia* t. B 1:176.**G. TURBINATUM** Rydb, T cl b 24:91. P 4:50 as *Sieversia* r.**GILIA** Ruiz & Pavon, Prod Fl Per 25 t 4 (1794). A 1:344d.

## GILIA.

Ab 314. A 1:7d.

**G. ACHILLAEFOLIA** Bth, bot reg sub t 1622. Par 304 t. Ab 314. B 1:497. Da 11. A 1:346d. [Lindl], bot reg t 1622, et Hook, bot mag t 3440 = multicaulis fide B 1:498.]**G. AGGREGATA** Spreng, syst veg 1: 626 (1825). B 1:496. 2:465. Z 2:165. Par 366 t. Cov 155 Mono Co.**G. BRANDEGEI** G 11:85. Br Colo 228.**G. BOLANDERI** G 8:263. B 1:490. 2:465.**G. BREWERI** G 8:269. B 1:494. P 1:137 as *navarretia* B.Span hi or less, at length much branched and diffusely tufted, minutely glandular-puberulent thruout: lf-divisions acerose, mostly entire: fls in lfy hds: cor y, hardly longer than the slender-subulate ex-lobes; ex-tube very sh: ovules and sds mostly solitary. Placer Co to Sierra Co, 6000-8000' alt (Brewer, Bolander). So Cal (Parish 1841.—See also *G. pungens*); Nev; Wyo.**G. CAMPANULATA** G 8:279. B 1:499.**G. CAPILLARIS** K 5:46. Cur 1:142. Jepson, Er 1:15. Z 2:165. B 1:488 as *leptalea* G.**G. CONGESTA** Hook Fl 2:75. B 1:496.Variety **CREBRIFOLIA** G, B 1:496.**G. COTULAEFOLIA** Steudel, Nom ed 2, 1:683. B 1:493. P 1:132 as *Navarretia cotulaefolia*.**G. CREBRIFOLIA** Nutt, Phil ac J ns, 1:156. B 1:496 as *congesta* var: c.**GILIA DEBILIS** Wat."Slender, 1-2' hl, lfy above; pubescence minute or hirsute; lvs alt, ½-1' lg, oblq, attenuate into a sh petiole, entire, or some of them broader and 3-lobed; bracts entire, resembling the lvs, twice longer than ex; fls nearly sessile; ex-teeth ovate-triangular, sh'er than tube; cor funnel-form, 8" lg, with elongated tube and deeply lobed limb, light-p; the sta upon the throat, exerted; cap 1" lg, the cells 1-seeded; sds without mucilage or spiracles.—Ut (Wheeler). Without the pinnatifid pungent lobing of the lvs and bracts which is usual in the section."—Wat, Am nat 7:302 (My 1873). Section *Navarretia*.**G. DENSIFLORA** Bth. B 1:491.

Span to 2° hl, rather stout and strict: lf-divisions num, filiform, rather rigid, in somewhat distant apparent whorls: w or rose-p cor-tube little lf at all exceeding the villous-hirsute bracts and ex;

cor lobes near ½' lg, obovate. SF southward.

*Leptosiphon densiflorus* Bth, hort soc tr 1834 t 18. Lindl bot reg t 1725. Hooker, bot mag t 3578.*Gilia grandiflora* Steud & Benth.*Leptosiphon grandiflorus* Benth, bot reg.*Gilia Leptosiphon* Steud, Nom.Variety **ELONGATA** Gray.

SBer (Parish 314); mts SD Co.

**G. DENSIFOLIA** Bth, in DC Prod 9:311.

Ab 316. B 1:495. Da 11. A 1:176d.

**G. DEPRESSA** Jones ex G 16:106. Z 2: 250.**G. DIANTHOIDES** Endl, Atakt bot t 29. DC 10:314. Hook, bot mag t 4876. B 1: 490. Da 11. Par 222 t. Br 1:204 Cruz. J 2:254 et. A 1:175, 176, as *Linanthus dianthiflorus*. Br, Z 1:114. Ha 104. Fringed*Gilia*. Fenzlia *dianthiflora*, Bth bot reg; F: *speciosa* et *concluna* Nutt, Gamb 157. **G. DIVARICATA** Nutt, Gamb 155. Da 11. B 1:494. Guad. P 1:136 as *Navarretia* d. G, syn fl 2:135 as a slender form of *Collomia gillioides*.**G. DUNNII** K, Pac Rural Press 31 My 1879. Cur 1:142 as *Loeselia effusa* G.**G. FILICAULIS** T. G 8:270, syn fl 2 (1): 142. P 1:134 as *navarretia* f. B 1:494.**G. FILIFOLIA** Nutt, Gamb 156. Greene. Cal ac b 2:407 Cruz. B 1:495. Da 11. A 1:176d.**G. FILIFORMIS** Parry ex G 10:75. B 1: 499.**G. FILIPES** Bth 325. B 1:490 as *pusilla* var: *californica* G.**G. FLOCCOSA** G 8:272. B 1:495. Da 11. A 1:176d.**G. FLORIBUNDA** G 8:267. B 1:492. A 1: 177.

A ft hi or more, bushy, slender, corymbose at summit: lf-divisions acerose, ½' lg, nearly smooth: fls cymose-clustered, delicately scented, some rather slender-pedicelled: ovules 4 in each cell. So Cal; Or; Baja mts!

**G. GILIOIDES** Greene. A 1:177d. Ab 315. **G. FLUTIONSA** Phil, in *Linnaea* 30: 196. Chili.

Da 11. Ha 104. Br Z 1:114 Cat.

*Collomia glutinosa* Bth.**G. GRACILIS** Hook, bot mag t 2924. B 1: 488 as *collomia gracilis* Dougl. P 1:141 as *Phlox gracilis*. P 3:300 as *Microsteris gracilis*.**G. GRANDIFLORA** G 17:223. Par 184. Z 2:165, 232. B 1:491 as *densiflora*.**G. HAEKESII** Curran, Cal ac b 1:12. Z 2:232.**G. HOOKERI** Bth, DC Prod 9:316. B 1: 493 as *pungens*.**G. HOWARDI** Z 2:250.**G. HETERODOXA** Greene, Cal ac b 1:10. P 1:134 as *navarretia* h.**G. HETEROPHYLLA** Dougl, bot mag t 2895. G, syn fl suppl 408. P 1:128 as *Collomia* h. Z 2:165.**G. INTERTEXTA** Steud. Nom ed 2, 1: 683. B 1:493. P 1:131 as *Navarretia* i (Hook Fl 2:75).**G. KENNEDYI** Porter, bot gaz 2:77. B 2:465 as *Parryae*.**G. LAESENI** G 11:84. B 1:497.**G. LATIFLORA** G, Syn Fl 2:147. B 2: 466. Ha 104. SD & LA Co.Variety **EXILIS** G. Ab 315. A 1:177d.



**GILIA LATIFOLIA** S. Watson.

Am Nat 9:347. So Ut Cov 166, Panamint mts.

CD (Parish 233).

**GILIA LAXA** Vasey & Rese.

Quintin (Palmer).

G. LEMMONI G. B 2:465. Da 11. Ha 104. P 2:257 et. A 1:175, 177 as Linanthus L.

**GILIA LEPTANTHA** Parish.

A 1:78 fdr.

G. LEPTOMERIA G 8:278. B 1:498. Z 2:232. Wat, bot king 270 t 26 f 6, 7.

G. LEUCOCEPHALA G 8:269, syn fl 2 (1):142. B 1:494. P 1:131 as Navarretia l.

G. LINIFLORA Bth, bot reg sub t 1622. B 1:489. Z2:95, 364. A 1:175, 177 as Linanthus l.

Cal, common; Baja! SD! Sber (Parish 462).

**Variety PHARNACEOIDES** Gray.

Da 11. =Linthanthus p.

Similar to the type except in the reduced size, a span hi, with capillary branches, the sometimes pale flesh-colored cor about 4 li in diam. Ore; Ut; BC; Baja! SD! thru the Rocky mts.

Gilia pharnaceoides Hooker, Fl 2:747 161. G. LONGIFLOA Z 2:250.

G. LONGITUBA Bth 324, 325. A 1:175 as Linanthus parviflorus. M 1:43 as Linanthus longituba. =G. micrantha fide IK.

G. LUTEA Steudel, Nom ed 2, 1:681. B 1:491 as micrantha (A 1:175 as Linanthus parviflorus).

G. LUTESCENS Steudel, .om ed 2, 1:681. B 1:495. 2:465. A 1:176 as Gilia floccosa.

**GILIA MACULATA** Parish.

A 1:89 fdr.

G. MELLITA P 1:71, 72, 134 (as navarretia mellita).

**GILIA MICRANTHA** Stend.

Throughout So Cal; Baja! LA.

Steud, nof 1:684. P 1:91 Mig. B 1:491. Da 11. A 1:175 as Linanthus parviflorus.

**G. MICROMERIA** G 8:279. B 1:499.

G. MILLEFOLIATA F & M, Sem Petr 35 (1838). B 1:498 as multicaulis. Greene, Er 3:103.

G. MINIMA G 8:269. B 1:494. Z 2:250. P 1:131 as Navarretia m.

G. MINUTIFLOA Bth, in DC 9:315. B 1:499.

**GILIA MULTICAULIS.**

Bth, bot reg t 1622. Ab 314. Greene, Cal ac b 2:407 Cruz. B 1:497. Da 11. A 1:7d. 346.

**GILIA NEVINII** A. Gray.

Br 1:204, 214, Z 1:114.

Cat. Cruz and Rosa (Br).

G. NUDICAULIS G 8:266. B 1:492. Parry, Wyo 7. Cov 556, White mts, Cal. P 3:304 as

**GILIA ORCUTTII** Parry.

Dav ac pr 4:40, Baja! A 1:78 fdr.

**G. FALLIDA** M 1:43. Sonoma Co, Cal.**GILIA PARRYAE** A. Gray.

Br 2:465. Z 2:77.

Mohave (Parry); Kern Co.

G. PARVULA P 1:72, 134 (as Navarretia p). Rydb, N Y bot gard mem 1:320 (1900) =Gymnosteris parvula fide M 1:3.

G. PHARNACEOIDES Bth, bot reg sub

t 1662. B 1:489. Ha 104. P 2:254 as Linanthus pharnaceoides. =liniflora fide IK.

**G. POLYCLADON** T, bot Mex Bound

147. B 1:496. Z 2:232.

**G. PROSTRATA** G 17:223. Da 11. A 1:

169 et. P 1:131 as Navarretia p.

**G. PUBESCENS** Steudel, nom ed 2, 1:

684. P 1:133 as Navarretia p.

**G. PULCHELLA** Dougl ex Bth, bot reg

sub t 1622. B 1:496.

**G. PUMILA** Nutt, Phil ac J ns, 1:156

(1847. B 1:496 Texas.

**GILIA PUNGENS** Benth.

Oregon to Ubi, Baja (Br). Arizona.

Z 2:165. B 1:493. (Hook, bot mag t 2947

=suarrosa fide B 1:493; (P 1:133 as

Navarretia squarrosa.) Ha 105. Parry

Wyo 5.

A span to ft hi, bushy; more or less viscid-pubescent, or nearly glab; rigid lvs little spreading or erect; cor w or rose-p; the lobes nar'er and half as large as in Californica; anth borne in throat, oblg; ovules 8 or 10 in each cell. Ore; Nev; Ar; Baja.

Cantua pungens T, N Y Lyc an 2:221.

Variety HALLII Milliken, Univ Cal pub

bot 2:43. M 1:146 as Leptodactylon

Hallii.

**Variety Hookeri** Gray.

Ha 105?—So Cal (Parish 1841).

Gilia Hookeri Benth.

Variety SQUARROSA G, 8:268.

Lf-divisions subulate, stouter, soon spreading or squarrose-recurved. Nev.

M 1:146 as Leptodactylon patens (not Gilia squarrosa H & A).

Variety TENUILOBA Milliken, Univ Cal pub bot 2:43. M 1:146 as Leptodactylon tenuilobum.

G. PUSILLA Bth, bot reg sub t 1622.

B 1:489. A 1:175 as Linanthus p.

**Variety CALIFORNICA** G 8:263. Cor 3"

lg. throat oft brownish, cx 1½" lg; ped

oft 1' lg. Cal, Nev, Ut. Bth 325 as filipes.

**G. SCHOTTII** G, bot king 267. B 2:466.

P 3:30 as Langloisia S.

G. SESSEI Don, G 17:223. P 1:128 as

Collomia heterophylla.

G. SETOSISSIMA G 8:271. B 1:489. 2:

465. P 3:30 as Langloisia s.

G. SINUATA Dougl ex Bth in DC 9:313.

=parviflora fide IK. B 1:498 as incon-

spicua var: S.

G. SQUARROSA H & A, bot Beech 151.

B 1:493. P 1:133 as Navarretia S.

**G. STAMINEA** Ab 314. A 1:344d.

G. STRICTA Liebmman, Ind sem hort Hafn (1853). B 1:489 as multicaulis

var: tenera.

**G. SUBRUDA** Tex G 8:276. B 1:497.**GILIA TENELLA** Benth.

B1:491. Da 11. Z 2:165. A 1:174 as Lin-

anthus bicolor.

Puget Sound to Sber Co (Parish 313).

**G. TENUIFLOA** Bth, bot reg sub t

1622. A 1:168d B 1:498. Da 11.

Variety ALTISSIMA Parish Ab 315. A

1:169 fdr.

Variety LATIFLOA G, B 1:498. B 2:

466 as latiflora G. A 1:169 fdr. Da 11.

**GILIA TENUILOBA** Parish.

A 1:8 fdr. M 1:146 as Peptodactylon ten-

uilobum.

G. TRICOLOR Bth, bot reg sub t 1622. B

1:498. Par 292. Parish, Er 6:90 (Antelope valley, Davidson), Cal.  
**G. TRIFIDA** Bth, in Hook Kew J 3:291 (1851). B 1:496 as *pumila*.  
**G. VEATCHII** Parry, Cal ac b1:198. Green, Cal ac b 1:198 Cedros (Veatch 1859). P 1:205.  
**G. VIOLACEA** M 1:56. Nevada Co, Cal.  
**G. VIRGATA** Steudel, nom ed 2, 1:684. B 1:495. Da 11. Ab 316. A 1:176, 169d. Variety **FLOREBUNDA** G. Ab 316. A 1:169d.  
**G. VISCIDULA** G 8:269. B 1:494. Bth 325; A 1:169 et. P 1:133 as *navarretia* v. Variety **HETERODOXA** G, syn fl supp 409. P 1:134 as *navarretia* h.  
**G. WATSONI** G 8:267. B 1:492.

#### Genus **GITHOPSIS** Nuttall.

Slender Ann with rather sm linear-oblong coarsely toothed sessile lvs: fls simply terminating the branches or becoming lateral, erect, all alike: ex-tube club-shaped, strongly 10-ribbed, adnate to the summit of the ovary, its limbo of 5 long and linear foliaceous lobes: cor tubular-campanulate, 5-lobed: fl short, dilated at the base; anth long, linear: ova 3-celled; stigma 3-lobed: cap club-shaped, coriaceous, crowned with the rigid ex-lobes of its own length, strongly striate-ribbed, many-sided, opening when the somewhat persistent base of the sty falls away by a round hole in its place: sds fusiform-oblong.

Nutt, Am phil sc tr ns, 8:258 (1843).  
**G. CALYCINA** Bth 321. B 1:446 as *specularioides*.

**GITHOPSIS DIFFUSA** A. Gray.  
 G 17:221. Da 10, Er 2:84 Cucamonga mts. (Parish); Vaca mts, south. A 1:6d.  
**G. PULCHELLA** Vathe, in Linnaea 38: 714. B 1:446 as *specularioides*.

**G. SPECULARIODES** Nutt, lc 8:258. Ab 387 Monica (Hasse). A 1:107d. B 1:446.

**GLANDULARIA** J F Gmel, syst 920 (1791). = *Verbena*.

**G. BIPINNATIFIDA** Nutt, Phil ac J 2: 123. B 1:609 as *V*; b.

**G. CAROLINENSIS** Gmel lc. = *V*: *aubletia*.

#### Genus **GLAUX** Linnaeus.

L, syst ed 1 (1735). A 1:198d.

**GLAUX MARITIMA** Linn.

Sea Milkwort: in saline soil round the northern hemisphere.

L, sp pl 207. A 1:198. B 1:469. Z 2:636.

**GLOSSOPETALON** G, Pl Wright 2:29 t 12 B (1853).

**G. NEVADENSE** G 11:73. B 1:108. 2:439.

**G. SPINESCENS** G, lc. B 1:108. Z 2:228. Br Colo 234. SBER mts (Parish 1291).

**GLOENOPORUS**

**G. CONCHOIDES** M 1:22. ....

**GLYCERIA** R Br, Prod 179 (1810). ....

**G. AIROIDES** Steud, syn Pl Gram 287. Japan. [Thurb, bot Wilkes exp 490, 491 = *Atropis distans* fide B 2:308.]

**G. ANGUSTATA** Thurb, bot Wilkes exp 490, 491. B 2:308 as *Atropis distans*.

**G. BULBOSA** Buckley, Phil ac pr 1862, 95. B 2:304 as *Melica fugax*.

**G. DISTANS** Reichenb Ic t 151, 152. B 2: 308 as *Atropis d*.

**G. FESTUCAEFORMIS** Reichenb Ic t 151, 152. B 2:308 as *Atropis distans*.

**G. FLUITANS** R Br, Prod 179. Australia. B 2:307.

**G. GLUMARIS** Griseb in Ledeb Fl Ross 4:392. B 2:313 as *Poa g*.

**G. LEPTOSTACHYA** Buckley, Phil ac pr 1862, 95-6. B 2:308 as *pauciflora*.

**G. MARITIMA** Reichenb, lc. B 2:308 as *Atropis distans*.

**G. MICHAUXII** Kunth, Rev Gram 1:118, 343 t 85. B 2:308 as *nervata*.

**G. MICROTHECA** Buckley, Phil ac pr 1862, 95-6. B 2:308 as *pauciflora*.

**G. NERVATA** Trin, st Pet mem st 6, 1: 365. B 2:307.

**G. PAUCIFLORA** Presl, Rel Hoenk 1:257. B 2:308. Da 19. Wat, bot King 384.

**GLYCERIA REMOTA** Fries.

San Bernardino mts (Parish 1661).

**GLYCOSMA** Nutt, ex T & G Fl 1:639 (1840). = *Myrrhis*.

**G. AMBEUUM** G 8:386. B 1:262.

**G. BOLANDERI** G 8:386. B 1:262. 2:451. = *M*: B fide IK.

**G. OCCIDENTALE** Nutt, ex T & G Fl 1: 639. B 1:262. = *M*: oc fide IK.

**GLYPHOCARPA** (Moss).

**G. BAUERI** Hampe, Linnaea 30: 457. B 2:400 as *Bartramia Menziesii*.

#### Genus **GLYCYRRHIZA** Linnaeus.

Liquorice: per herbs with glandular-viscid herbage, odd-pinnate lvs and minute stipules: fls y'ish-w, in axy peduncled spk: cx 5-cleft, with the 2 upper lobes sh'er or partly united: sta monadelphous or diadelphous, the alt anth sm'er: ovary 2-many-ovuled; sty sh and rigid, curved at tip: pod sh, flattened, prickly, few-seeded, indehiscent.

**G. GLUTINOSA** Nutt, T & G Fl 1:298. B 1:144 as *lepidota* var: g. Ab 224. Jepson. Er 1:14 near Blue Lakes.

Erect or decumbent, 6-9 dm hl, nearly glab and viscid with minute sessile resinous dots, or glutinous by a villous or hirsute glandular pubescence; lfts 13-19, oblg-lanceolate, 2.5-5 cm lg; stipules ovate-acuminate to lanceolate, persistent; spikes oblg, 2.5-4 cm lg, on peds a little sh'er; pod bur-like. LA Co, below 4000°.

**GLYCYRRHIZA LEPIDOTA** Pursh.

B 1:143, 2:442. Da 5. Parry, Wyo 9. SBER (Parish 400; W. G. Wright).

#### Genus **GLYPTOPLEURA** D. C. Eaton.

**GLYPTOPLEURA** Eaton, bot King 207 t 20 (1871).

**G. MARGINATA** Eaton, lc. B 1:431. Ut.

Mohave! Nevada. (

**G. SETULOSA** G. B 1:431. Ut.

Mohave (Parry). Utah.

**GNAPHALUM** L, Gen ed 1, 250 (1737). A 1:187d.

**G. ALBATUM** M 1:141.

**GNAPHALUM BICOLOR** Biot.

A 1:60fdr.

**G. CALIFORNICUM** DC. A 1:187d. Er 1:12. B 1:341 as *decurrens* var: C. Ab 410. Par 63.

**G. CHILENSE** Spreng. Ab 410. Ha 128.

Da 9. A 1:188d. Cotton-batting plant.

**GNAPHALUM DECURRENS** Ives.

Ives, Am J sci 1:380. B 1:341. Da 9. Par 63.

New England; British Columbia to Mex-



lco; Baja.

**GNAPHALODES** Tourn.

**G: AMPHIBOLA** Greene, Man 183. = *Micropus amphibolus* G.

**G: CALIFORNICA** Greene, Man 183. = *Micropus californicus* F & M.

**Genus GODETIA Spach.**

Spach, hist veg Phan 4:336 (1835). = *Oenothera* fide IK.

Simple or branching erect ann with alt lvs: fls mostly in lfy racemes or spk cx-tube above the ova obconic or sh-funnelform: ret 4, broad and sessile, entire, emarginate, or 2-lobed, varying from phlox- or lilac-p or rose-color to nearly w: sta 8, those opp the pet sh'ter; anth basifixed: ovary 4-celled: cap ovate to linear, mostly 4-sided, somewhat coriaceous, often longitudinally ribbed, 4-celled, 4-valved: sds in 1 or 2 rows, more or less cubical or quadrangular, com obliquely pointed at one end, the opp end obliquely truncate and with a densely fimbriate-toothed or tuberculate margin; angles oft prismatic, rendering the sd strikingly similar to that of *Mentzelia*.

**G. ALBESCENS** Lindl, bot reg, misc 61 (1841). B 1:229, 2:448. =OE: a fide IK. **G. AMOENA** G Don in Sweet, Hort Brit ed 3,237. =OE: a fide IK. B 1:230. Par 246 t. LA (Davidson).

**G: AMOENA** Lilja. Jepson, Univ Cal pub bot 2:325.

Variety **ALBICAULIS** Jepson, Univ Cal pub bot 2:329.

Variety **Concolor** Jepson, Fl W Mid Cal 334 et Univ Cal pub bot 2:328.

Variety **LINDLEYI** Jepson, Univ Cal pub bot 2:329 based on *Oenothera* L of Douglas.

**G. BILOBA** Wat, B 1:231. =OE: b fide IK.

Greene, Fl Fr 222. Jepson, Fl W Midd Cal 333, Univ Cal pub bot 2:333.

**G: BLASDALEI** Jepson, Univ Cal pub bot 2:330 fd. SF.

**G. BOTTAE** Spach, in Nouv Ann Mus. Par 4:393 (1835). B 1:231. Da 6. Par 246. Ab 267. A 1:165d, 166. =OE: B fide IK.

Jepson, Univ Cal pub bot 2:330.

Variety **USITATA** Jepson, Univ Cal pub bot 2:332.—"Stig sh-oblg or quadrate; cap com sessile or nearly so, thick, rather obviously 8-ribbed. So Cal; rather com. Sber. Parish, No. 3672."

Variety **CYLINDRICA** Jepson, Univ Cal pub bot 2:332 fd. Fresno Co, Cal.

**G: DEFLEXA** Jepson.

"Substrictly branching or simple, 2-5 dm hi, st more or less twisted or flexuous: lvs thickish, narly oblg, some tapering to apex, sh'ly petioled, 2-8 mm broad, 3-6 cm lg, remotely denticulate, the teeth minute but more or less salient; herbage almost glab; fls spicate; cx-buds large, 2.8 cm lg, before anthesis borne on abruptly deflexed sessile ovaries; cx-tip not free in bud, the united lobes turned to one side under the open cor; pet lilac, sprinkled with crimson dots, cuneate-obovate, abruptly sh-clawed, truncate or evenly shallowly re-tuse at summit, 2.5-3 cm lg; sta sub-equal, nearly or quite ½ length of pet;

sty com exceeding sta; stig peltate or somewhat saucer-shaped, undulately 4-lobed; ova slender, w with fine sh hairs; cap apparently 4-sided but mature fr not known."—Jepson, Univ Cal pub bot 2:332.

Type specimen at Kew: "Sandy plains of LA." W Lobb, 1854 (?).

**G: PURPUREA** Don. Jepson, Univ Cal pub bot 2:344.

Variety **ELMERI** Jepson, Univ Cal pub bot 2:345.—"Fls loosely spicate below the dense terminal cluster of young buds; pet broadly ovate, dark r in the dried spec, 1.4 cm lg; cap stout and rather sh.—Sber. Elmer, no 3972."

Variety **PROCEA** Jepson, Univ Cal pub bot 2:346.—"Slender, tall (5.5-7.5 dm hi), simple or with few sh slender branch-lets; fls sm, pet 5 or 6 mm lg.—Berkeley, Bioletti, JI 1891."

Variety **LACUNOSA** Jepson, Univ Cal pub bot 2:346.—"Tall (4 or 5 dm hi), freely branching, upper portions of branches angled (!) or compressed (!); fls congested at ends of branches; pet 3-1.3 cm lg. Oakdale, San Joaquin valley, WLJ (lvs acute); Douglas, probably Monterey Co (lvs obtusish, or in Herb. Lindley, acutish), branches strict, slender, naked except at tip!"

**G: DELICATA** Abrams, T cl b 32:539. Jepson, Univ Cal pub bot 2:352. Campo and Potrero.

**G. QUADRIVULNERA** Spach, hist veg Phan 4:389. Ab 267. B 1:230, 2:448. Da 6. Br 1:203 Cruz, 210 Rosa. A 1:165d. =OE: g fide IK.

Jepson, Univ Cal pub bot 2:340.

Variety **APICULATA** Jepson, Univ Cal pub bot 2:341.—"Pale, slender; buds strongly apiculate.—Howell Mt, WLJ no 2441."

Variety **VACENSIS** Jepson, Univ Cal pub bot 2:341.—"Oft branched at base, sts slender; fls very remote; cap slender, 3 cm lg. Vaca mts, WLJ."

Variety **DAVYI** Jepson, Univ Cal pub bot 2:341.—"Lvs all or mainly oblg and mostly obtuse, about 1.2 cm lg; midrib of valves prominent, ribs 0 or 4.—Point Reyes, Davy, no 6701."

Forma **FLAGELLATA** Jepson, Univ Cal pub bot 2:341.—"Simple or with few elongated very slender whip-like branches. 3½-6 dm hi, fls very remote.—Vaca mts, WLJ, 12 Je 1893."

Forma **SETCHELLIANA** Jepson, Univ Cal pub bot 2:341.—"Branching from base: young pts very canescent; sty longer than sta; cap sh, densely sh-villous.—Santa Cruz mts, Setchell & Jepson, 20 Je 1896."

Variety **HALLII** Jepson, Univ Cal pub bot 2:341.—"Freely branching, 6 dm hi; pet ovate, with an abrupt sh sm point, light pink with a sharply defined deep p or rish wedge-shaped spot at apex; stig very sh, subquadrate; ova and cap hairy; ribs filiform.—Box Springs, Riverside, Hall, no 6241."

Variety **RUBRISIMA** Jepson, Univ Cal pub bot 2:342.—"Pet roundish ovate, 9-13 mm lg, uniformly deep rish-p ovaries canescent; cap strigulose-pubescent.—Box Springs mt, Riverside, Hall, no 6240."

**G. EPILOBIODES** Wat. B 1:231. Ab 268. Da 6. Greene, Cal ac b 2:398 Cruz. A 1:165d. =OE: e fide IK.  
**B** 1:231. Jepson, Univ Cal pub bot 2:343.  
**G: ARNOTTII** T & G Fl 1:503. Jepson, Univ Cal pub bot 2:346.  
**G: SPARSIFOLIA** Jepson, Univ Cal pub bot 2:347 fd.

Type locality: "San Joaquin valley at Tracy, Benj. Cobb, 10 Ap 1900."  
**G. GRANDIFLORA** Lindl, bot reg 1841 misc 61. Par 246. B 1:229. =OE: Whitney fide IK.

Jepson, Univ Cal pub bot 2:347.  
 Synonymy: *Oenothera grandiflora* Wat 8:596. OE: Whitney G 7:340, 400.

**G. DUDLEYANA** Ab 267. A 1:165 fdr. Jepson, Univ Cal pub bot 2:334.

**G. ARCUATA** Jepson, Univ Cal pub bot 2:335 based on *oenothera* a, K 1:58.

Synonymy: *G: hispidula* Wat 8:599, 609 fide Jepson.

**G: HANSENI** Jepson, Univ Cal pub bot 2:336.

Type locality: Armstrong's station, Amador Co, 5000', Hansen, no 1090, in 1895. Type in Herb Kew.

**G. VIMINEA** Spach, hist veg phan 4: 388. Ab 267. B 1:230. A 1:166d. =OE: v fide IK.

Jepson, Univ Cal pub bot 2:336.

Variety **CONGDONII** Jepson, Univ Cal pub bot 2:338.—"Three to 4.5 dm hi; buds loosely pilose; ex-tips slender and very distinct; pet y at base.—Hetch-Hetchy, W. J. Congdon."

Variety **INCERTA** Jepson, Univ Cal pub bot 2:339.—"Very lfy, 2-4 dm hi; pet deep crimson, 1.2-2 cm lg; cap abundant, 8-ribbed; stig oval.—Yosemite valley."

Variety **MARGARITAE** Jepson, Univ Cal pub bot 2:339.—"Buds and fls few and widely scattered on the very slender sts; color scheme in dried specimens seemingly very different from type; ex-tube very slender, 9-14 mm lg. seg more or less cohering in anthesis.—Margarita valley, S Luis Obispo Co, Mrs. R. W. Summers."

**G: PARVIFLORA** Jepson, Univ Cal pub bot 2:339 based on *Oenothera viminea* Douglas var: *parviflora*? H & A, bot Beech 342 (1841).

**G: GODDARDII** Jepson, Univ Cal pub bot 2:342.

Variety **MIGUELITA** Jepson, Univ Cal pub bot 2:342.

Forma **CAPITATA** Jepson, Univ Cal pub bot 2:342.

#### Genus **GRINDELIA** Willd.

**GRINDELIA CUNEIFOLIA** Nutt.

Variety **PHARNACEVIDES** Gray.

**GRINDELIA GLUTINOSA** Dunal.

**GRINDELIA PROCERA** Greene.

"Late-aestival and autumnal sp. Herbaceous per. Strictly erect, 5-7' hi, simple up to the corymbose-paniculate summit, the stout w st scabro-puberulent, plant otherwise glab, slightly glutinous; lower lvs unknown; upper cauline lanceolate, attenuate-acute, entire, 2-3' lg; inv sm, low-hemispherical; bracts with appressed base and slender recurved tips; rays sh; pap-awns 2. Bottom lands of the lower San Joaquin, in places inundated in spring and early summer."

—Greene, Man 172.

**GRINDELIA PALUDOSA** Greene.

"About 5' hi, sterile lfy shoots 1' hi or more, surviving the winter, the plant otherwise herbaceous: herbage glab except the scabrous-ciliate lf-margins; only the inv glutinous: lvs slightly fleshy, oblg-lanceolate to spatulate-oblg, 2-3' lg, conspicuously serrate, at least those of sterile shoots with a broad cordate-clasping base, the lobes surrounding the st: inv squarrose; ak with prominent turgid angles, those of ray triquetrous, of disk compressed; awn 2 only, even in ray, stout, strongly flattened. Abundant in brackish marshes of Suisun Bay. Ag-O."—Greene, Man 172.  
**GRINDELIA SQUARROSA** Dunal.  
 Cuyamaca! Texas. Montana. Minn.

#### Genus **GUTIERREZIA** Lagasca.

**GUTIERREZIA CALIFORNICA** T. & G.

Cantilles! SF. Arizona.

**GUTIERREZIA EUTHAMIAE** T. & G.

Montana to Mexico. Cantilles! CD.

Variety **MICROCEPHALA** A. Gray.

So Cal—Texas, Mexico, Baja.

**GUTIERREZIA LARICINA** Greene.

"Planta humilis, propemodum herbacea potius quam suffruticosa, e basi multicaulis, caulibus adscendentibus erectisve, 10-18 cm altis, usque ad inflorescentiam foliolosissimis; foliis primordialis 2 cm longis, anguste linearibus deflexis, ceteris multis axillaribus crebre fasciculatis, omnibus saturate viridibus, undique mureculato-scaberulis; capitula mediocria numerosa, in summo caule corymboso-paniculata; involucri obconici bracteis 12-15, adpressis, obtusis, apice manifestim herbaceo-increasatis; flores radii 3-5, disci circa 5; pappi paleis circa 7, oblongis, acutis, achenio villosa aequilongis."—Greene, in Sonderabdruck aus Fedde, Repertorium 7:195 (1909).

Type locality: CD!

**GUTIERREZIA LINEARIFOLIA** Lag.

**HELIANTHESTRUM OCCIDENTALE.**

"Stout, 2-4' hi, erect, parted above into several stoutish very erect pedunculiform monocephalous branches: lvs lanceolate, 6' lg or more, thickish and somewhat fleshy, almost gummy to the touch, and with some tomentose pubescence: rays showy,  $\frac{3}{4}$ ' lg: disk brownish-y: pap-paleae ovate-lanceolate, tapering into a long awn. Suisun marshes. JI-O."—Greene, Man 202.

**HELIANTHELLA MAJUSCULA** G lfts 1:48. NM.

**HELIANTHUS CALIFORNICUS** DC.

SF; Baja! along streams.

**HELIANTHUS GRACILENTUS** A. Gray

SBer Co; SD Co; Baja; dry hills.

**HELIANTHUS PETIOLARIS** Nutt.

Baja to Oregon; Texas.

**HEMIZONIA CITRINA** Greene.

"Lowest lvs opp, oblg-lanceolate, 3-nerved, obtusish, glandular-pubescent, not lanate: hds at first few, in a simple corymbose-panic: fls lemon-y: tips of inv-bracts sh and broad; bracts of receptacle joined into a cup: ak with inconspicuous stipe. Northern part of Marin Co, a vernal sp, flg in Ap and My."—Greene, Man 194.



**HEMIZONIA CLEVELANDI** Greene.

"Lower lvs narly linear, 1-nerved, silky-lanate as in *H. luzulaefolia*; racemose or spicate fig branches villous with lg spreading hairs: fl w: ak nearly as in *luzulaefolia*. Common from Marin and northern Napa Co. to Ore."—Greene, Man 194.

**H. DEERMANNI** Greene.

"Viscid and pubescent, heavy-scented, 1-3' hi: minute lvs of fig branchlets scattered; bracts of hemispherical inv viscid-pubescent and beset with stalked glands; terminal gland inconspicuous: disk-fls 10-15. Mt Diablo and southeastward. Ag-O."—Greene, Man 195.

**H. KELLOGGII**, Greene.

"Hirsute below, loosely paniculate above, 1-3' hi, the hds on slender pedicels: lower lvs pinnately parted: inv  $\frac{1}{4}$ ' hi; bracts glandular on back: ray ak with a slender curved beak; pap of sterile ones of disk lg, almost equalling cor, lacerately truncate and united into a tube from base almost to summit. Abundant in fields of grain on the lower San Joaquin from Antioch southward."—Greene, Man 195.

**HESPERODORIA** Gifts 1:173 with *Bigelovia Menziesii* var: *scopulorum* (Jones, Cal ac pr, sr 2, 5:692) as type.

**H. SCOPULORUM** Gifts 1:173.

**H. IALLII** Gifts 1:173 based on *Aplopappus* H (G).

**HEUCHERA**.

**HEUCHERA ELEGANS** Abrams, SCA: b 1:67 fd. 1:89, Wilson's Peak; Mt Lowe (H: rubescens of local lists not of T). Type locality: Martin's Camp, LA Co.

**H. LEPTOMERIA** Gifts 1:112 NM.

**H. PACHYPODA** Gifts 1:111.

"Ithizome stout, subliguous, strongly invested by a coat of dead lf-bases: lvs very sm, in a compact tuft, firm, more or less pubescent on both faces, suborbicular, hardly  $\frac{1}{2}$ ' broad, petioles about as lg: slender wiry scapes 6 or 8' hi including infl, p, scaberulous and slightly glandular: panicle 3-5' lg, subracemose and more or less definitely unilateral, the few fld branches remote: cx somewhat gibbously turbinate, tube glandular, this and the oblg obtuse g-tipped seg of about = length: sta and pet of about = length and well exerted."—Gifts 1:111. Lone Pine, Inyo Co, Cal, 7000'.

**HEUCHERA RUBESCEUS** T. Ab, SCAB 1:89, Mt San Antonio, LA Co.

**H. VERSICOLOR** Gifts 1:12. NM.

**HEPCEASTANUM** Tourn ex Rupp. = *Aesculus*.

**H. CALIFORNICUM** Greene, Man 73. = *Ae. C.*

**HOFMEISTERIA PLURISETA** A. Gray. (C: Utah; Arizona; Baja (Br).

**HOLCZCINA** Greene, Man 199.

**H. FILIPES** Greene, f. = *Lagophylla* f (G), fide IK.

**HORCKELIA PLATYCALYX** Rydb. Ab, SCAB 1:89, Indian Hill, Claremont, LA Co.

**H. SERICEA** Rydb, Ab SCAB 1:89, Balena harbor, edges of sand dunes, LA Co.

**HYMENOPAPPUS**.

**H. PARVULUS** Gifts 1:150. Colo.

**ISOCOMA**.

**ISOCOMA ARGUTA** Greene.

"Branches 6-10' hi, more or less pubescent or hirsute below, glabrous above, lfy thruout; lvs diminishing upwards, the lowest 1' lg, all broadly oblanceolate, of coriaceous texture, with saliently spreading coarse and acute or mucronate teeth: hds  $\frac{1}{2}$ ' hi, turbinate, 12-15-fld: inner pap-bristles distinctly flattened and tapering very gradually from base to apex. Subsaline plains east of the Yaca mts, in Solano Co, Jepson."—Greene, Man 175.

**I. ELAETOSA** Greene.

"Stout, apparently only suffutescent, but 2° hi, with many loosely fastigate lg branches all very sparsely hispidulous: lvs sm for the plant, oblg-oblanceolate, entire or with a few spinulose-serrate teeth, those of the fig branches num but reduced to sm sessile oblg entire acute bracts: cymes mostly of few and pedicellate hds; inv turbinate, bracts much imbricated, subquadrate oblg, ending in an abrupt g tip thickened by a large gland, and with a terminal spinescent cusp or mucro."—Gifts 1:176. Tulare Co, Cal.

Madrono.

**I. DECUMBENS** Gifts 1:172.

"Branches a  $\frac{1}{2}$  lg, very slender, decumbent, sparsely lfy and lvs very sm, narly oblanceolate, sharply serrate-toothed: hds much scattered, about 3 at the end of each slender branchlet and all pedicellate; inv sm, turbinate, bracts imbricated, oval or oblg, acute, their g tips villous-pubescent: ak nar-turbinate, very silky; pap of coarse rigid unequal bristles."—Gifts 1:172. SD—Greene thinks = *Isocoma* sp x *Corethrogyne* sp.

**I. EREMOPHILA** Gifts 1:171.

"Branches  $1\frac{1}{2}$ ' hi, stout, glab, parted in the middle to form a loosely fastigate panicle of cymose corymbs: lower lvs spatulate-oblanceolate 2' lg, obtuse, remotely subserrate-toothed, glab, punctate, those of panicle all reduced, linear, entire: inv not sm, turbinate, their bracts glab, not viscid, subquadrate-oblg; obtuse, only inconspicuously and sh'ly g-tipped, tips of inner with a large low gland on back."—Gifts 1:171. CD (Or 2223).

Suffrutescent, 2-3° hi fls bright chrome y. Dos Cabezas 1 N 1890, now Imperial Co, Cal—identified as *Bigelovia veneta*.

**I. LATIFOLIA** Gifts 1:172.

"Very stout sts densely lfy and villous-arachnoid, the cobwebby wool extending to bases of broad sessile lvs, these spatulate-obovate,  $\frac{1}{2}$ - $\frac{3}{4}$ ' lg,  $\frac{1}{2}$ ' wide below summit, coarsely and closely serrate-toothed all around except at base: hds many, rather large, forming a dense cymose panicle or thyrus; inv sh-turbinate, of not very many bracts, these sh, mostly obtuse."—Gifts 1:172. Cruz.

**I. LEUCANTHEMIFOLIA** Gifts 1:171.

"Branches stout, tortuous, lfy, with large foliage up to the ample compound cyme of large hds, scaberulous and viscid: lvs 2' lg, broadly oblanceolate, obtuse, coarsely and closely serrate-toothed, scaberulous above, somewhat villous-arachnoid and viscid beneath: hds glomerate in 2's or 3's at ends of

branches and branchlets of cyme, large, with broadly subturbinate inv many-bracted, bracts with broad obtuse g and glandiferous tips: ak?—Gifts 1:171. Warner's SD Co!

**I: MICRODONTA** Gifts 1:171.

"Branches stout, scabrous, densely lfy up to ample cymose panicle of rather large hds: lvs sm; about  $\frac{3}{4}$  lg, spatulate-oblg, entire below middle, subseriate-denticulate near apex, whole margin more or less scabrousciliate, both faces glab; branches of panicle lg and lfy, lvs little reduced: inv turbinate, their many bracts with lg scaberulous g tips and abruptly as well as almost pungently acute, Santa Maria, Cal (Mrs. Blochman)." Gifts 1:171.

**I: OXYPHYLLA** Gifts 1:171.

"Plant evidently large, the lg branches striate, loosely villous-hairy, lfy up to the ample compound cyme of rather large hds: lvs 1-1 $\frac{1}{2}$ ' lg, linear-lanceolate, entire, very acute, of thin texture, glab, light g: inv broadly turbinate, glab, not viscid, the g herpaceous tips of bracts large, elliptical: limb of cor remarkably sn."—Gifts 1:171. Jamul, SD Co.

**I: PEDICELLATA** Gifts 1:170. Tex.

**I: EUSEYI** Gifts 1:70. Ar.

**I: SEDOIDES** Gifts 1:172 based on *Bigelovia veneta* var: *sedoides* (Greene, Cal ac b 2:400).

**I: TENUISECTA** Gifts 1:169. Ar.

**I: VILLOSA** Gifts 1:172.

"Sts extremely robust but decumbent, parted above the middle into a broad panicle of many and compact cymose corymbs, st and branches very lfy and softly villous with lg spreading somewhat viscid and arachnoid pubescence: lvs of main st 1' lg or more, spatulate-oblg, obtuse, coarsely serrate, sparsely villous, viscidulous, those of branches not  $\frac{1}{2}$  as large, oft subentire: hds not of the largest, very many and crowded: inv turbinate, bracts much imbricated, pungently acute, the g tips conspicuous but bearing no gland."—Gifts 1:172. So Cal.

**KRYNITZKIA UTAHENSIS** G, Syn Fl 2 (1): 427. Parish, SCAB 2:83, Ord mt, Mohave.

*Eritrichium halopterum submolle* G, lc 394. *Cryptanthus submollis* Cov 166. Panamint Mts.

**KYRSTENIA** Neck, Elem 1:81. Gifts 1:8 (takes as types: *Eupatorium aromaticum* L and *Ageratum altissimum*). Based on *Eupatorium* sp as cited by Greene.

**K: ABORIGINUM** Gifts 1:8 based on E: a (P 4:277).

**K: ACUTA** Gifts 1:11 fd.

**K: ALTISSIMA** Gifts 1:8 based on *Ageratum* a (L, sp pl 839).

**K: AMPLISSIMA** Gifts 1:10 fd. Jalisco, Mex.

**K: ANGUSTATA** Gifts 1:8 based on E: a (P 4:277).

**K: ARIZONICA** Gifts 1:9 based on E: a (P 4:279, 280).

**K: AROMATICA** Gifts 1:8.

**K: BETULAEFOLIA** Gifts 1:10 fd. Chih.

**K: BOREALIS** Gifts 1:8 based on E: b (Greene, *Rhodora* 3:83).

**K: CALOPHYLLA** Gifts 1:11 fd. Saltillo, Mex.

**K: CEANOTHIFOLIA** Gifts 1:8 based on E: c (Muhl in Willd sp 3:1755).

**K: HERBACEA** Gifts 1:9.

**K: INCARNATA** Gifts 1:8 based on E: i (Walt, Carol 200).

**K: JUCUNDA** Gifts 1:8 based on E: j (P 3:180).

**K: LAETA** Gifts 1:11 fd. Mex.

**K: MELISSOIDES** Gifts 1:8 based on E: m (Willd sp 3:1754).

**K: NEMORALIS** Gifts 1:8 based on E: n (P 4:278).

**K: PARVIFOLIA** Gifts 1:12 fd. Saltillo, Mex.

**K: PAUPERSCULA** Gifts 1:9 based on E: p (G 17:205).

**K: ROTHROCKII** Gifts 1:9 based on E: R (G, Syn Fl 2:102).

**K: RUFA** Gifts 1:10 fd.

**K: SUBINTEGRA** Gifts 1:10 fd. Mex.

**K: TRYPSIFLORA** Gifts 1:9 fd. Chih.

**K: TRACYI** Gifts 1:8 based on E: t (P 4:278).

**K: VIBURNIFOLIA** Gifts 1:8 based on E: v (P 4:276).

**LACINIARIA FORMOSA** G lfts 1:149. Colo.

**LAOTHOE** Raf, Fl Tell 3:53. Gifts 1:90.

**L: ANGUSTIFOLIA** Gifts 1:91 (K 2:104 sub *Chlorogalum*).

**L: DIVARICATA** Gifts 1:91 (Kunth, Enum 4:682 sub *Chlorogalum*).

**L: LEICHTLINII** Gifts 1:91 (Baker, Gard Chrm 1874; 689 sub *Chlorogalum*).

**L: PARVIFLORA** Gifts 1:91 (Wat 14: 243 sub *Chlorogalum*).

**L: POMERIDIANA** Raf, Fl Tell 3:53 based on *Scilla* p (DC) = *Chlorogalum* p.

**L: PURPUREA** Gifts 1:91 (Br, Z 4:159 sub *Chlorogalum*).

**LAPPALA**

**L: LEUCANTHA** Gifts 1:152, NM.

**LASALLEA** Gifts 1:5 (type: *Aster sericeus*).

**L: NUTTALLII** Gifts 1:5 based on *Aster montanus* Nutt not of Allioni.

**L: PHYLOLEPIS** Gifts 1:5 based on *Aster* p of T & G.

**L: SERICEA** Gifts 1:5 based on *Aster* s of Vent.

**LASTHENIA** Cav.

**L: BURKEI** (Greene) Greene, Man 204.

**L: CARNOSA** (Greene) Greene, Man 205.

**L: CHRYSANTHA** (Greene) Greene, Man 204.

**L: CHRYSOSTOMA** (F & M) Greene, Man 205.

**L: CONJUGENS** Greene, Man 204.

**L: FREMONTII** (T) Greene, Man 204.

**L: GRACILIS** (DC) Greene, Man 206.

**L: MACRANTHA** (G) Greene, Man 205.

**L: MICROGLOSSA** (DC) Greene, Man 205.

**L: PLATYCARPHA** (G) Greene, Man 205.

**L: TENELLA** (Nutt) Greene, Man 205.

**L: ULLIGINOSA** (Nutt) Greene, Man 205.

**L: HIRSUTULA** Greene.

"Pap seldom if ever o; ak somewhat cuneate. Stout and low, from a strictly ann rt, mostly branching very freely; the whole herbage rather roughly sh-



hirsute: lvs broadly linear, oft with saliently projecting scattered teeth, the lower conspicuously connate, sheathing the st: inv-bracts obovoid, obtuse or acutish: rays oblg: ak mostly very smooth, rounded at summit, manifestly compressed; pap of 2 brownish very slender-subulate aristiform bristles. Plentiful on open rocky and grassy hills along the seacoast from Marin Co, southward. My. Je.—Greene, Man 206.

**LEPIDIUM ACUTIDENS** Ab. SCAB 2:41 based on *L. dictyotum* var? *acutidens* G 12:54.

Type locality: Yreka, Cal.

**LEPIDIUM LASIOCARPUM** Nutt. Ab, SC Ab 1:89, sand dunes, Ballona harbor, LA Co.

**LEPTURUS CYLINDRICUS** Trin. Ab, SCAB 1:87, Mesmer, LA Co.

**LOTUS CUPEUS** Greene.

"Low, slender flaccid and nearly glab per, the decumbent sts only 5-8' lg, lfy thruout: lowest lvs of but 3 cuneate-obovate truncate or retuse lflets, the lflets of the others 5-7 and cuneate-oblg, acutish; stipules of all sm, herbaceous, more or less distinctly ovate; umbels little exceeding lvs, lowest bractless and only 1 or 2 fld, others with 3 or 4 fls subtended by an unifoliate bract quite like the ordinary lflets: ex turbinate, the triangular subulate teeth sh'er than tube: cor sh, not longer than the breadth of the broad banner which greatly surpasses the other pet, these all at first dingy-y but at length copper color"—Gifts 1:74. Hackett's meadows, Cal, at 8600'.

**LUPINUS CULBERSONII** Greene.

"Low, per, not alpine, neither depressed nor compactly tufted, but subacaulescent, 6-10' hi, with decidedly thinnish foliage and scarcely canescent with a sparse pilose or villous hairiness; petioles lg and slender, lflets 5-7, almost elliptic oblg, cuspidately acute, 1½' lg or more; ped scapiform, bearing the lg raceme just above the foliage com with a solitary lf toward the base: racemes 2-4' lg, crowded and obscurely verticillate; cor rich p, less than ½' lg, banner little sh'er than the other pet, keel nar, slightly falcate, retrorse-cillolate."—Gifts 1:73. Forks of the Kaweah river, Cal, at 8000', JI 1904 (J: D: Culbertson).

**LUPINUS DASYPHYLLUS** Greene.

"Per, the stout simple sts strongly striate, villous, very lfy; lvs large, sh-petioled, the lance-linear lflets (basal ones cuneate-oblg, very obtuse) 2' lg, acute, rather loosely villous-hirsute on both faces: racemes sessile, 4-6' lg, the large fls obviously verticillate, their lg linear densely villous bracts not caducous: ex & pedicels densely lg-villous: cor ½' lg, p'ish, banner sm-er than the other pet, keel nar and little curved, naked, or with a few loose hairs above the middle. Farwell Gap, Cal, at 10,000'. 3 Ag 1904, J. D: Culbertson."—Gifts 1:73.

**LUPINUS GRACILIS** Agardb. Ab SCAB 1:89, San Fernando mts, LA Co.

**LUPINUS HYPOLASIS** Greene.

"Low alpine per not cespitose, the

stoutish sts very lfy and suberect from the branches of the sh caudex; petioles slender, lflets 5-7, very unequal, all broad and obtuse, cuneate-oblg, ¼-½' lg, appressed-villous above, densely villous-tomentose beneath: racemes sh, subsessile, the sh ped stout; whorls of fls 3 or 4: cor p, ½' lg, pet equal, keel falcate, retrorse-cillolate above the middle."—Gifts 1:74. Farwell Cap, Cal, C: A: Purpus.

**LUPINUS HYPOLEUCUS** Greene.

"Sm tufted alpine per, the multicapitous caudex scarcely woody, the lg petioles and scarcely lg'er sts slender, canescently villous, as also the lvs above: lflets 7-9, unequal, somewhat elliptical, the largest ½' lg, densely w-villous beneath and that face somewhat concave: racemes sh, of about 3 whorls of middle-sized deep-p fls, the pet subequal, keel not much curved, retrorsely villous-cillolate from below the middle almost to apex."—Gifts 1:74. Near the summit of White Chief Peak, Cal.

**MACHAERANTHERA**

M: CICHORIACEA Gifts 1:148. Colo.

M: SPECTABILIS Gifts 1:148. Colo.

**MACRONEMA**

M: BOLANDEI Greene.

Synonymy—*Linosyris Bolandri* G 7: 354 et *Chrysanthamnus B* (Greene, Er 3: 114) fide Gifts 1:81.

**MALVASTRUM**

M: DIGITATUM Gifts 1:154. NM.

**MALVEOPSIS** Presl. = *Sphaeralcea* fide IK.

M: ARCUATA Greene.

"Size and general habit of fasciculata, but stouter; lvs ½ as large, obtuse and with inconspicuous rounded lobes, very strongly rugose-velvety and white-tomentose beneath: interruptedly spicate flg branches stout, strongly recurved, the fl-fascicles all on one side: cor merely pinkish: carpels densely stellate-tomentose. Eastern slopes of the Coast Range back of Belmont; wrongly referred to *M. marruboides* in the Flora Franciscana."—Greene, Man 66.

M: PASCICULATA OK ex Greene, Man 66.

M: FREMONTI Greene, Er 1:171, Man 66. = S: Lindheimeri fide IK.

**MELICA IMPERFECTA**

Variety MINOR Scribn. Ab, SCAB 1:89, canyon near Chatsworth Park, LA Co.

**MENTHA ARVENSIS** L.

Variety CANADENSIS Parish, SCAB 8:7, "common at lower alt" than var: glabrata.

Variety GLABRATA Fernald, G man Ed 7, 711. Parish, SCAB 8:7, Sber mts.

**MESOREANTHUS** Gifts 1:89. Type: M: barbiger.

M: BARBIGER Gifts 1:89 based on *Streptanthus barbiger* Greene.

M: FALLAX Gifts 1:90.

"Slender glab, glau ann freely branched above base, 1-2' hi; lvs 2; fls subsessile and frg spikes lg and lax: fls sm, the spreading or recurved tips of sep very lg, equalling or even exceeding the sm dark-r w-edged pet: only upper pair of st = sep, their fl united to summit, their anth very sm: pods very nar, compressed but slightly torulose, 1½' lg,

curved downwards on very sh spreading pedicels: sds oval, little compressed, marginless."—Gifts 1:90. Near St Helena, Cal.

**M: VIMINEUS** Gifts 1:90. Near Lakeport, Cal.

"Size and habit of M: fallax, equally glab and glau: lower lvs narly oblanceolate; upper lance-linear, those of branches narly linear, all entire: fls more showy in lg loose spikes: ex with comparatively sh and w-petaloid tips greatly exceeded by the rather ample w pet; pods ?"—Gifts 1:90.

**MICROSEMLA** Gifts 1:89.

**M: POLGALOIDES** Gifts 1:89 based on Streptanthus p (G).

**MIMULUS LATIDENS** Greene.

"Ann, slender, com much branched from base, 3-10' hi, glandular-puberulent: lvs ovate to ovate-lanceolate,  $\frac{1}{2}$ -1' lg, 3-5-nerved, entire or sparingly toothed, sh-petioled or sessile: pedicels as lg as fl, in fr much longer: ex oval, 3-6" lg; teeth triangular-ovate: cor 3-5' lg, nearly regular, but limb very sm, w; throat y'ish. Rich low plains of the lower Sacramento and southward. Ap, My."—Greene, Man 278.

**MITOPHYLLUM** Gifts 1:88.

**M: DIVERSIFOLIUM** Gifts 1:88 based on Streptanthus diversifolius Wat, and "doubtless including S: linearis Greene."

**MONARDELLA ODORATISSIMA** Benth

Wash—SD Co! Nevada; Utah, Ha U Ill.

**MONARDELLA PRINGLEI** A. Gray.

Colton, Cal (C. G. Pringle).

**MONARDELLA THYMIFOLIA** Greene.

Cedros Island (Greene).

**MONARDELLA VILLOSA** Benth.

**NEMACLADUS ADENOPHORUS** Parish, SCAB 2:28 fd.

**NUTTALLIA**.

**N: DAVIDIANA** Baillon. Gifts 1:110.

**OCLEMENA**

Gifts 1:4 (type Aster acuminatus).

**O: ACUMINATA** Gifts 1:4 based on Aster acuminatus.

**O: NEMORALIS** Gifts 1:5 based on Aster nemoralis Ait.

**OKYS** Tourn.

**O: LUTEA** "J. Bauh (1651); Tourn (1700); Lam (1778)."—Greene, Man 71 = Oxalis corniculata L.

**O: OREGANA** Greene, Man 71. = Oxalis O.

**PARNASSIA CIRREATA** Piper Er 3:128

(1899). Ab, SCA b 1:67.

Type locality: Sber mt.

**PECTIS**

**P: TAXIFOLIA** G lfts 1:148, NM.

**FEDICULARIS**

**P: ANGSTISSIMA** Gifts 1:151 NM

**P: MOGOLLONICA** Gifts 1:151 NM.

**PERISCARIA** [Tourn] L, syst ed 1

(1735). = Polygonum fide IK. Gifts

1:23.

**P: FUSIFORMIS** Gifts 1:24 based on

Polyg: f (Greene, Er 1:259).

**P: OMISSA** Gifts 1:24 based on Polyg: o

(P 5:200).

**P: FALLAX** Gifts 1:24 based on Polyg:

f (P 5:200).

**P: ARCUATA** Gifts 1:24 based on Polyg:

a (P 5:201).

**P: CAREYI** Gifts 1:24 based on Polyg: C

(Olney, R I PI 29).

**P: HARTWRIGHTII** Gifts 1:29 based

Polyg: r (Sheldon, Minn bot studies

**P: AMPHIBIA** S. F. Gray, Nat Arr Brit

Pl 2:268. = Polyg: a fide IK. Gifts 1:24.

**P: MACULOSA** S F Gray, lc 269. Gifts

1:24 as type of genus.

**P: FLUITANS** Gifts 1:26 based on

Polyg: f (Eaton & Wright bot 368), 106.

**P: PURPURATA** Gifts 1:27 fd. Lassen

Co, Cal.

**P: CANADENSIS** Gifts 1:28 fd. Galt,

Ont.

**P: MESOCHORA** Gifts 1:28. Minn; Ia;

Ind.

**P: FLATTENSIS** Gifts 1:29. Wyo.

**P: SUBCORIACEA** Gifts 1:30. Wyo.

**P: LAETEVIRENS** Gifts 1:31. Colo.

**P: PSYCHOPHILA** Gifts 1:31. Colo..

**P: OREGANA** Gifts 1:31. Ore.

**P: INSIGNIS** Gifts 1:32. Sber mts.

**P: FISTULOSA** Gifts 1:32. Ar.

**P: REMOTA** Gifts 1:34. Me.

**P: NOVAE ANGLIAE** Gifts 1:34 (Mass),

108.

**P: LAURINA** Gifts 1:35. Ohio.

**P: RIGIDULA** Gifts 1:24 based on

Polyg: r (Cheldon, Minn bot studies

1:14), 39d.

**P: LUDOVICIANA** Gifts 1:29 based on

Polyg: L (Meisn in DC 14:116).

**P: PLANTAGINEA** Gifts 1:40. Ia.

**P: WARDII** Gifts 1:40. Colo.

**P: OTOPHYLLA** Gifts 1:41. Tex.

**P: ABOIGINUM** Gifts 1:41. Okl.

**P: LANGLOISII** Gifts 1:41. La.

**P: CUSICKII** Gifts 1:42. Ore; Wash; Id.

**P: FRANCISCANA** Gifts 1:42. SF.

**P: HESPERIA** Gifts 1:43. San Mateo

Co, Cal.

**P: ALISMAEFOLIA** Gifts 1:44. Cal.

**P: OPHIOPHILA** Gifts 1:44. Ar.

**P: BOTHERCKII** Gifts 1:45. Ar.

**P: ABSCESSA** Gifts 1:46 (Mass), 108 as

P: Hartwrightii.

**P: ASCLEPIADEA** Gifts 1:46. Minn.

**P: NEBRASCENSIS** Gifts 1:47. Nebr.

**P: AMMOPHILA** Gifts 1:47. Minn; Wis.

**P: PORTEI** Gifts 1:35. Pa.

**P: COCCINEA** Gifts 1:24, 35d, based on

Polyg: c (Muhl in Willd Enum 428), 106.

Variety **ASPRELLA** Gifts 1:36. NY.

**P: PRATINCOLA** Gifts 1:36. Ind; Ill;

Ia; Mo.

**P: SPECTABILIS** Gifts 1:37. Ill; Kans.

**P: LONCHOPHYLLA** Gifts 1:37. Ind.

**P: GRANDIFOLIA** Gifts 1:37, 49d. Ia;

Minn; Wis.

**P: PROPINQUA** Gifts 1:39 S Dak.

**P: MURICULATA** Gifts 1:47. Colo.

**P: HOMALOSTACHYA** Gifts 1:48. Nev.

**P: VILLOSLA** Gifts 1:49. Id.

**P: CHELANICA** Gifts 1:49. Wash.

**P: ANDREWSII** Gifts 1:109. Conn.

**P: COVILLEI** Greene.

"Stout, erect, several ft hi, leafy with

large lanceolate acuminate lvs ascend-

ing on sh stout petioles of an i or even

less; blades of all but the uppermost

6-8' lg, nearly 2' wide, slightly canescent

on both faces with fine appressed oft

tortuous hairs, the midvein beneath beset

with stouter appressed hairs bristly

above a tubercular base: ped beset with

very slender gland-tipped hairs; spikes

2-3 $\frac{1}{2}$ ' lg, their bracts canescently strig-

ulose and with some sh gland-tipped

hairs intermixed; rounded ak slightly



obovate."—Gifts 1:44.

Type locality: Near Visalia, Cal.

**PENTSTEMON CEPHALOPHORUS** Greene.

"Subspecific to P: procerus; low and stout, herbaceous save as to the horizontal superficially seated subligneous rt stock, the strongly decumbent fig sts 4-8' hl, glab below, as are also the obovate or spatulate subcoriaceous basal lvs, but upper pt of st and infl, even to cor, sparsely and slenderly glandular-hairy: cauline lvs in 3 pairs, all of oblg outline, rather larger than basal ones, all entire, middle pair com with a few fls in axils, summit of st crowned with a dense globose and capitate cluster: sep thin, lance linear: cor less than ½' lg, straight and narly tubular, with sm limb of sh sub-equally rounded seg: color p'ish."—Gifts 1:79, Summit Lakes, at 11,000', Tulare Co., Cal.

**P. OREOCHARIS** Gifts 1:163.

"More than 1' hl, stout sts rigidly erect above a merely sh decumbent base; plant wholly glab, of a light g, not glau: basal lvs 3 or 4' lg, oblanceolate, acutish, the cauline in about 4 pairs, lanceolate, sessile, 2 or 3, lg, sh'er than internodes: infl lg and interrupted, the axyl clusters about 5 or 6 pairs and all but uppermost on pedicels 1½-1' lg: sep mostly quadrate-oblg, some obovate-dilated, all subulate-pointed and with nar oft erose scarious margins: cor p. sm for the plant, 4" lg, ascending, not deflexed as in the allied P: confertus; tube broad, nearly cylindric."—Gifts 1:163. Pine Ridge, Fresno Co., Cal.

**P. DEPRESSUS** Gifts 1:162.

"Akin to P: confertus but low, caespitose, with very stout woody branches 1-3' lg clothed with sm entire coriaceous lvs ½' lg, elliptical, on sh stout petioles, the 2 or 3 cauline pairs subsessile: infl depressed-capitiform, the rather few cor large for the plant, tubular, with sh not very irr limb: sep subquadrate-oblg, glandular pubescent."—Gifts 1:162. White Mts, Mono Co., Cal.

**P. PROPINQUUS** Gifts 1:166. Ore.

**P. PRODUCTUS** Gifts 1:166. Ore.

**P. ELLIPTICUS** Gifts 1:167. Wash.

**P. VERONICAEFOLIUS** Gifts 1:167. Id.

**P. ALBERTINUS** Gifts 1:167. Alberta.

**P. LASSENIANUS** Gifts 1:164.

"Akin to P: confertus, almost wholly herbaceous, stout, erect, 1' hl, light g and glab: lowest lvs oblanceolate, cauline in 4 pairs, ovate to oblg-lanceolate, 2' lg, sessile and half-clasping by a broad PHACELIA.

**P. RUPESTRIS** Gifts 1:152. NM.

**PHALARIS LEMMONI** Vasey. Ab, SCA b 1:89, Inglewood, LA Co.

**PHLOX** L.

A—more or less matted; lvs sh and crowded.

**P. CANESCENS** T & G.

Very densely caespitose and lanate-canescens; lvs subulate.

**P. COVILLEI** Nelson.

Less densely caespitose and canescens than P: canescens; lvs ovate to lanceolate.

**PHLOX DOUGLASII** Hook.

Fl 2:73. B 1:486. Cantilles' Parry, Wyo 6, 11, 14. Parish, Z 5:74 San Antonio mts (Hall). Par 254 t.

Loosely or somewhat densely tufted, not canescens; lvs acerose; cx-sinuses not replicate.

Variety **LONGIFOLIA** G. Ore, Nebr, SD mts (Parish 424).

**PHLOX AUSTRUMONTANA** Coville. Cov 151. Ha 106.

Loosely tufted; cx-sinuses replicate.

B—not matted; lvs lg, not crowded.

**P. ADSURGENS** T.

Branches ascending; lvs broad-lanceolate to ovate.

**PHLOX DOLICANTHA** A. Gray.

Branches nearly erect; lvs nar-lanceolate, not exceeding 4'.

So Cal (Parish 1338).

**PHLOX LONGIFOLIA** Nutt.

B 1:482, 2:464. Parry, Wyo 5.

Erect; lvs linear, 1-2' wide.

Variety **PUBERULA** E: Nelson. Lvs and fls smaller than in type.

Variety **STANSBURYI** A. Gray.

G 8:255. Cov 152.

Panamint mts, Cal. Nev.

Phlox speciosa var. Stansburyi T Bot Mex B 145 (1859).

Type localities: "gravelly hills near the Organ mts, NM," and "San Luis mts."

Baja mts! British Columbia; N. M.; Utah.

**P. OCCIDENTALE** Durand.

Erect, glandular-viscid above; lvs nar-oblg, tapering at both ends.

**P. STANSBURYI** Heller.

Erect, canescens; lvs nar-lanceolate to linear, margins cartilaginous.

Synonymy: P: speciosa var: S of T. P: longifolia var: S. of G.

**P. MESOLEUCA** Gifts 1:152. NM.

**PINUS MURRAYANA** Balf, Ab, SCA b 1:87, "summit of Mt San Antonio, LA Co."

**PINUS TUBERCULATA**

Parish. SCA b 2:155, Jac?

**PLANTAGO FASTIGIATA** Morris, T cl b 27:116. Parish, SCA b 8:7, CD.

**P. VIRGINICA** L.

Variety **LONGIFOLIA** G. Syn Fl 2 (1): 392. Parish, SCA b 8:7, Orange Co.

**PLANTAGO XEBODEA** Morris, T cl b 36:515 based on P: picta Morris non Colenso.

**PLANTAGO BIGELOVII** G. Pac Ry R 4:117. B 1:612. Morris, T cl b 36:524.

**PLANTAGO ELONGATA** Pursh, Fl 2: 729 (1814). Morris, T cl b 36:525.

Range: Assiniboia; N and So Dak; Nebr; Okl; Mont; Colo; Ut.

Synonymy (fide Morris T cl b 36:525): P: pusilla Decaisne, pro parte in DC 13: 696. P: Bigelovii Wat, bot king 5:212 (non G.). P: pusilla var: macrosperma E, bot gaz 8:175 (non Steud). P: pusilla G, pro parte, syn Fl 2 (1):392 (non Nutt).

P: elongata Auct Am plur, pro parte. P: myosuroides Rydberg, NY bot gard mem 1:369.

**PLANTAGO HETEROPHYLLA** Nutt. Am Phil se tr sr 2, 5:177 (1837).

Range: NJ; Pa; Dela; Md; NC; SC; Ga; Fla; Ill; Ky; Tenn; Ala; Miss; Mo; Ark; La; Tex; Cal; Baja.

Synonymy (fide Morris, T cl b 36:529):

**P:** caroliniana Pursh (?) Fl 1:98 (non Walter). **P:** pusilla Decaisne, pro parte, DC 13 (1): 696 (non Nutt.). **P:** perpusilla Decaisne, in DC 13 (1): 697. **P:** Californica Greene, Cal ac b 1:123 (non **P:** Durvillei var: Californica F. & M.).

**PLANTAGO PUSILLA** Nutt., Gen 1:100 (1818). Morris, T cl b 36:527.

Range: Mass; RI; Conn; NY; NJ; Pa; Dela; Md; DC; Va; SC; Ga; Fla?; Ill; Ky; Tenn; Ala; Mo; Ark; Kans; Tex; Wash; Ore; Cal.

Synonymy (fide Morris, T cl b 36:527): **P:** maritima Barton, Prod Fl Phil 26 (non L). **P:** hybrida Barton, comp Fl Phil 2:214; Fl N Am 3:77 t 98 f 1. **P:** linearifolia Muhlenberg ? Cat, ed 2, 15, nomen nudum et T, Fl US 185. **P:** pusilla Decaisne, pro parte, in DC 13 (1): 696. **P:** elongata Auct Am plur (non Pursh).

Variety **ENGELMANNI** Morris, T cl b 36:528, based on Var: major E, bot gaz 8:175 (non **P:** major L).

Type locality: near Atoka, Indian Territory.

**FLEIOCARDIA** Gifts 1:85, based on Streptanthus sp. **P:** tortuosa, type.

**P:** BREWERI Gifts 1:86 (S:B, G ex Greene, Fl Fr 259).

**P:** FOLIOSA Gifts 1:86 (S:f, P 3:226).

**P:** GRACILIS Gifts 1:86 (S:g, Eastwood, Cal ac pr, sr 2, 2:285).

**P:** HESPERIDIS Gifts 1:86 (S: h, Jepson, Er 1:14).

**P:** OBBICULATA Gifts 1:86 (S: o, Greene, Fl Fr 2:58).

**P:** SUPERDESCENS Gifts 1:86 (S:s, Greene, Er 1:147).

**P:** TORTUOSA Gifts 1:86 (S:t, K ex Greene, Fl Fr 258).

**P:** MAGNA Gifts 1:87.

"Stout glab glau ann branched from near base 2° hi: lowest lvs spatulate-ovate, 3' lg 1½ broad, coarsely dentate, the broad triangular teeth not callous-tipped, those subtending the branches sh'er, cordate-ovate, obtuse, entire or nearly so: fis not seen: fr'g raceme lg, lax, the pedicels 1-1½ lg, stoutish, ascending: pods very lg and slender, 3-4½' lg, subterete, scarcely torulose, straight and ascending or subfalcate-recurved, tipped with a prominent sty: sds sm, obl-g linear marginless."—Gifts 1:87. Sber mts, 4900' (W: G: Wright).

**P:** FENESTRATA Gifts 1:86.

"Low slender glab glau ann, branched from base, 6' hi; proper foliage 0 in the very mature specimens, a few sm ovate cordate-clasping entire bracts on branches: ex very sm, deep p: cor large for the plant, pet with well developed broadly obovate limb and slender claw, the whole of a faint rose-color beautifully fenestrate with delicate dark-r veins: pods slender, straight, acute, 1½' lg, spreading or deflexed, not strongly compressed, lightly torulose: sds oval, thickish, marginless."—Gifts 1:86. Tehipite valley, Fresno Co, Cal.

**PNEUMONANTHE** Gleditsch in Mem ac Berl 5:130 (1751). = Gentiana fide IK. Gifts 1:68 as valid.

**P:** AFFINIS Gifts 1:71 based on G: a (Griseb).

**P:** BIGELOVII Gifts 1:71 based on G:B (G).

**P:** BRACTEOSA Gifts 1:71 (G: b, Greene).

**P:** CALYCOSA Gifts 1:71 (G: c, Griseb).

**P:** CLAUSA Gifts 1:71 based on G: c (Raf. Med Fl 1:210), et Dasystephana Andrewsii Small.

**P:** FLAVIDA Gifts 1:71 (G: f, G of 1846), et G: alba G of 1848 (not G: alba Muhl, a nomen nudum).

**P:** FORWOODII Gifts 1:71 (G: F of G).

**P:** GLAUCA Schm, Roem Archw 1 (1): 10. Gifts 1:71 (G: glauca Pall).

**P:** INTERRUPTA Gifts 1:71 (G: i, Greene).

**P:** LATIFOLIA Gifts 1:71 (Dasystephana l, Small).

**P:** LINEARIS Gifts 1:71 (G: l of Froel).

**P:** MENZIESII Gifts 1:71 (G: M of Griseb).

**P:** NEWBERYI Gifts 1:71 (G: N of G).

**P:** OCHROLEUCA Don. Gifts 1:71. G: o, Froeb). Dasystephana villosa (L) Small.

**P:** OREGANA Gifts 1:71 (G: o, E).

**P:** PABRYI Gifts 1:71 (G: P of E).

**P:** PABYFOLIA Gifts 1:71 (Dasystephana p, Small).

**P:** PLATYPETALA Gifts 1:71 (G: p, Griseb).

**P:** PORPHYRIO Gifts 1:71 (G: p, Gmel).

**P:** PUBERULA Gifts 1:71 (G: p, Michx).

**P:** REMOTA Gifts 1:71 (G: r, Greene).

**P:** RUBEYI Gifts 1:71 (G: R, Greene).

**P:** SAPONARIA Gifts 1:71. Schm. Gifts 1:71 (G: S, of L; Dasystephana S, of Small).

**P:** SCEPTUM Gifts 1:71 (G: s, Griseb).

**P:** SETIGERA Gifts 1:71 (G: S, G).

**P:** SPATHACEA Gifts 1:71 (G: s, Kunth).

**POLYGONUM KELLOGGII** Greene, Fl Fr 134. Parish, SCab 8:7, Sber mts, Bear, etc.

**POLYPHYA.**

**P:** LACINIATA Ag.

Forma **UMBILICALIS** Ag.

**P:** LEUCOSTICTA Thur.

**P:** PERFORATA J. Ag.

Forma **SEGREGATA** Setchell & Hus.

Forma **LANCEOLATA** Setchell & Hus.

**P:** NEREOCYSTIS And.

**P:** NAADIUM And.

**P:** AMPLISSIMA Setchell & Hus.

**P:** MINIATA Ag.

Forma **CUNEIFORMIS** Setchell & Hus.

**P:** TENUISSIMA Setchell & Hus.

**P:** ABYSSICOLA Kjellm.

**P:** VARIATA Kjellm.

**P:** OCCIDENTALIS Setchell & Hus.

**QUERCUS ENGELMANNI**

Parish, SCA b 2:156 cites **P:** oblongifolia. Rydb, NY bot gard b 1:224, as to SD Co specimens, as this sp.

**QUERCUS LOBATA** Nee. Ab, SCab 1:89, Chatsworth Park, LA Co.

**Q:** WISLIZENI A. DC. Ab, SCab 1:89, frequent on the coast slope of the Sierra Madre mts. \*\*\* Parish, SCab 2:155. Ab, SCab 3:1.

**RADICULA** Dill, Gen 121 (1719). Gifts 1:113. (Nasturtium et Roripa sp.).

**R:** SINUATA Gifts 1:113 (Nutt sub N).



**R: SESSIFLORA** Gifts 1:113 (Nutt sub N.)

**R: LYRATA** Gifts 1:113 (Nutt sub N.)

**R: OBOTUSA** Gifts 1:113 (Nutt sub N.)

**R: RADIOLA OBOTUSA** G. lfts 1:113. Parish, SCAB 8:7, Bluff lake.

**Nasturtium obtusum** Nutt, T & G Fl 1:74.

**R: POLYMORPHA** Gifts 1:113 (Nutt sub N.)

**R: LIMOSA** Gifts 1:113 (Nutt sub N.)

**R: CURVISILIQUA** Gifts 1:113 (Hook sub Sisymbrium).

**R: SPHAEROCARPA** Gifts 1:113 (G sub N.)

**R: CURVIPES** Gifts 1:113 (P 3: sub Roripa).

**R: OCCIDENTALIS** Gifts 1:113 (Greene, Fl Fr sub N.)

**R: DICTYOTA** Gifts 1:113 (Greene, Fl Fr sub N.)

**R: MULTICAULIS** Gifts 1:113 (P 3:—sub Roripa).

**R: TENERRIMA** Gifts 1:113 (Greene, Er 3:—sub Roripa).

**R: CALYCINA** Gifts 1:113 (E sub N.)

**R: NUTTALLII** Gifts 1:114 (Rydb sub Roripa).

**R: ALPINA** Gifts 1:114 (Rydb sub Roripa).

**R: WALTERI** Gifts 1:114 (Ell, Sk sub Sisymbrium).

**R: COLUMBIAE** Gifts 1:114 (Howell sub Roripa).

**R: PACIFICA** Gifts 1:114 (Howell sub Roripa).

**RAMONA PACHYSTACHYA** Ab, SCA b 1:68, based on Audibertia incana pachystacha G. Syn Fl 2:461 (1888); A: p of Parish, Er 6:91 (1898). Type locality: Bear.

**RAMUS.**

**R: FASCICULATA** Gifts 1:63. NM. . .

**R: URSINA** Gifts 1:63. NM.

**R: CASTOREA** Gifts 1:64. Ar

**R: CUSPIDATA** Greene.

"Allied to ursina and castorea and to R: tomentella but sm'er, the tomentose pubescence different, coarser, looser and with lg'er and hirtellous hairs intermixed rather copiously, especially along the veins: lvs  $\frac{3}{4}$ -2! lg, oval to elliptical, abruptly and oft cuspidately acute, sharply saliently and closely serrulate, those of vigorous shoots with even some coarse serratures below the cuspidate apex: fls very copious, in dense cymes from all the axils, 5-merous, the triangular cx-teeth lg'er than tube: fr not seen, said to be well flavored and edible."—Gifts 1:64.

Foothills of the mts in Kern Co, Cal.

**R: OBOTUSISSIMA** Greene.

"Decid shrub with sh rigid dense lyf and finely puberulent branchlets, these dark r-p the first season, afterwards grayish and glabrate: lvs sm,  $\frac{3}{4}$ -1 $\frac{1}{4}$ ' lg on very sh and slender petioles, of a light g on both faces, thin, glab above, puberulent on the veins beneath, these prominent, of elongate obovate outline cuneately tapering at base, at apex very obtuse, even oft almost truncate, minutely serrulate: umbels nearly sessile each maturing a single dark-p fr large for foliage, 3-seeded."—Gifts 1:64. Sisson, Cal.

**R: BOEIDIUM** Gifts 1:143 based on Rhus microphylla (E) as type.

**R: MICROPHYLLUM** Gifts 1:43. Tex.

**R: GLABELLUM** Gifts 1:43. Tex.

**R: VESITUM** (Engler) Gifts 1:44. Tex.

**R: RUGULOSUM** Gifts 1:44. Tex.

**R: RETUSUM** Gifts 1:44. Chih.

**R: FOTOSINUM** Gifts 1:44. San Luis Potosi, Mex.

**R: CINEREUM** Gifts 1:144. Near Durango, Mex.

**RIBES BEANDEGEI** Eastwood, Cal ac pr; sr 3, bot 2:242 fd, t 23 f 1 a, 1b.

**RIBES CEREUM** Dougl. Ab. SCAB 1:89, Mt San Antonio, LA Co.

**RIBES MALVACEUM**

Variety **VIRIDIPOLIUM** Ab, SCA b 1:67 based on "R: glutinosum of local lists, not Bth," LA Co, with 1. Ab SCA b 1:89, Gabriel mts above 3000'; Monica mts.

**R: SCUPHAM** Eastwood, Cal ac pr; sr 3, bot 2:242 fd, t 23 f 2a, 2b.

**R: INDECORUM** Eastwood, Cal ac pr; sr 3, bot 2:243 fd, t 23 f 3a, 3b.

**R: ASCENDENS** Eastwood, Cal ac pr; sr 3, bot 2:244 fd, t 23 f 4a, 4b.

**R: HITTILLIANUM** Eastwood, Cal ac pr; sr 3, bot 2:245, t 24 f 6a, 6b.

**R: GLAUCESENS** Eastwood, Cal ac pr; sr 3, bot 2:245 fd, t 24 f 7a, 7b.

**R: OLIGACANTHUM** Eastwood, Cal ac pr; sr 3, bot 2:246 fd, t 24 f 8a, 8b.

**R: SERICEUM** Eastwood, Cal ac pr; sr 3, bot 2:246 fd, t 24, f 9a-f.

**R: HYSTRIX** Eastwood, Cal ac pr; sr 3, bot 2:248 fd, t 24 f 10a-d.

**ROBIP** Gesner. = *Nasturtium* fide IK.

**R: DICTYOTA** Greene.

"Stout, erect, 2-4' hi, hirsute-pubescent; racemes rather dense: pods ovate lanceolate; valves firm in texture, with strong tortuous midvein and anastomosing veinlets; partition thick, favose-reticulate. Marshes of the lower Sacramento."—Greene, Man 20.

**R: LYRATA** Greene, Man 20 based on *Nasturtium lyratum* Nutt (= N: curvisiliqua Nutt fide IK.)

**R: PALUSTRIS** Greene, Man 20 based on n: palustre Leyss.

**R: TENERRIMA** Greene, Er 3:46. Cal.

**ROSA MOHAVENSIS** Parish, SCA b 1:87 t 7, based on R: californica var: glabrata Parish.

Genus **SAGITTARIA** Linnaeus.

Per aquatic or marsh herbs with tuber-bearing or nodose rtstocks; lvs with nerves connected by num veinlets: scapes erect, decumbent or floating: fls mon or dioe, borne near the summit of the scapes in whorls of 3s, pedicelled, the stam com uppermost, whorls 3-bracted: perianth seg 6, outer 3 herbaceous persistent and reflexed or spreading in the pist fls: sta num, inserted on the convex receptacle; anth 2-celled, dehiscent by lateral slits: pist fls with num distinct 1-ovuled ova and sm persistent stig: ak densely aggregated in globose hds, compressed; sds curved; embryo horseshoe-shaped. Arrowhead.

**S: ARIFOLIA** Nutt. Parish, Er 3:58, "Buff Lake, alt 7400", SBER mas." M 3:109 NDak.

Variety **DIMORPHA** Lunell. M 3:111 fdr.

Variety **MONOMORPHA** Lunell. M 3:111 fdr.

Variety **POLYMORPHA** Lunell. M 3: 111 fdr.

Variety **STRICTA** J G Smith, Mo bot gard r 6:7 t 1.

Variety **CUNEATA** Lunell. M 3:109.

**S. CALYCINA** Da 18. A 1:89 as *Photocarpus californicus*.

**S. CALYCINA** E, bot Mex bound 212. Ab 17, as *Lophotocarpus* Cal.

**S. CHINENSIS** Sims. Parish. Z 1:122, S.Ber. Z 1:176. B 2:201, cult in Cal, by Chinese.

**S. CUNEATA** Sheldon. M 3:112 as *arifolia* var: C.

**SAGITTARIA LATIFOLIA** Willd.

Rtstock slender; scapes 0.2-1 m hi, angled; lvs very variable, ovate-sagittate to linear, acute, lobes more or less divergent acuminate; fls mon with the lower verticils pist or dioe, 2-4 mm wide; pet w; sta num, 25-35; fil glab; pist pedicels sh'ier than Stam; ak broadly winged on both margins, 3 mm lg, with a lateral horizontal or curving beak, 1/4-one-third its length.

Ab 18.—"Occasional on margins of ponds about L.A."

**S. VARIABILIS** E. Ab 18 as *latifolia*. B 2:201.

Genus **SALAZARIA** Torrey.

Cx at first campanulate or oblg, with 2 entire lips and no gibbous projection on back, in fr much enlarged, globose-inflated, thin and bladderly, reticulated, closed: cor, sta, etc, as in *Scutellaria*: upper sty-fork 0. Monotypic.

**S. MEXICANA** T, bot Mex bound 133 t 39. B 1:604. Named in honor of Senor Salazar, Mex bound commissioner. Cov 176.

Type locality: Chih, ravines near the Rio Grande.

Mohave! Baja; Nevada; Utah; Arizona.

**SALIX** L, syst ed 1 (1735). A 1:359d.

**S. ARCTICA** Pallas. Alk, etc. B 2:90.

Variety **PETRAEA** And. B 2:90. Cal.

**S. ARGOPHYLLA** Nutt, Sylv 1:71 t 20. B 2:85 as *longifolia* variety a. Ab 102. A 1:359d.

**S. ARGUTA** And, DC 16 (2): 206. B 2: 84 as *lasianandra*.

Variety **LASIANDRA** And, lc. B 2:84 as l. var. typica.

**S. AUSTINAE** Bebb. B 2:88. Plumas Co.

**S. BABYLONICA** L, sp pl 1017. And, Z 1:41. Weeping willow, cult.

**S. BIGELOVII** T, Pac Ry R 4:139. And, Sal mon 163 f 94. DC 16 (2): 255. B 1:86 as *lasiolepis* var.

**S. BRACHYCARPA** Nutt Sylv 1:69. B 2: 85 as *longifolia* var. *argophylla*?

**S. BRACHYSTACHYS** Bth 336. B 2:87 as *flavescens*.

**S. BREWERII** Bebb. B 2:88.

**S. CALIFORNICA** Bebb. B 2:89, 483.

**S. BAKERI** Seem. M 3:69.

**S. CAPRECIDES** And, Sal. Bor-Am 11. B 2:87 as *flavescens*.

**S. CASCADENSIS** M 3:9 based on *tenera* DC 16 (2): 288 not A Br.

**S. CYCLOPHYLLA** And, in Vet ac Handl Stock 6: n 1, 138 (1867).

Variety **PELLITA** And, DC 16 (2): 244. B 2:87 as *sitchensis* var. *angustifolia* Bebb.

**S. CORDATA** Muhl, in Ges Nat Fr Neue Schr 4:236. B 2:85. M 4:72.

Variety **MACKENSIEANA** Hook. Ha 70. Sargent, Silva 9: t 479.

Variety **WATSONI** Bebb.

"Should probably be merged with variety *Mackenzleanum*."—Hall.

Southern California (Parish 1785).

**S. COULTERI** And. B 2:90.

**S. CUNEATA** Nutt, Sylva 1:66. B 2:87 as *sitchensis*.

**S. EXIGUA** Nutt, Sylva 1:75. B 2:85 as *longifolia* var. *exigua*. A 1:360d. Ab 102.

Variety **VIRENS** Rowlee. Ab 102. A 1: 360d.

**S. FENDLERIANA** And, Sal Bor-Am 115. B 2:84 as *lasianandra* var. F.

**S. FLAVESCENS** Nutt. Sylva 1:65. B 2: 86.

**S. FLUVIATILIS** Nutt Sylva 1:72, 73. B 2:85 as *longifolia*.

**S. GEYERIANA** And, Salmon 86 f 50. DC 16 (2):226. B 2:87.

**S. GLAUCA** L. B 2:89.

Variety **VILLOSA** And. B 2:89.

**S. GLAUCOPS** And, DC 16 (2): 281. B 2: 89 as *glauca* var. *villosa*.

**S. HARTWEGI** Bth. B 2:86 as *lasiolepis* var.

**S. HINDSIANA** Bth 335. B 2:85 as *sessilifolia* var. H.

**S. HOFFMANNIANA** H & A, bot Beech 159. B 2:84 as *lasianandra*.

**S. HUMILIS** Marsh, Arb 140. B 2:86.

Variety **HARTWEGI** And. Sal mon 236. B 2:86.

**S. LAEVIGATA** Bebb. B 2:83. Ab 100. A 1:360d. Br 1:216 Rosa. Greene, Cal ac b 2:412 Cruz. Bebb. Am nat 8:202. Cov 198. M 3:81.

Type localities: "Santa Cruz, Ukiah, Alameda Co. Cal."

Throughout Cal; Ore; Guatemala.

S.Ber (Parish 545); Cruz; Rosa. Da 16.

Variety **ANGUSTIFOLIA**: "Lvs nar'er, taper pointed, falcate, 3 or 4' lg, 9" broad near roundish base, approaching *S. nigra*."—B 2:84. Yreka, Cal.

Variety **CONGESTA**: "Aments sh, densely fld, scarcely exceeding the ample lvs of ped; cap globose-conical, sh'ly pedicelled."—B 2:84.

**SALIX LASIANDRA** Benth.

**S. LASIANDRA** Bth 336. B 2:84. Da 16. Z 1:41. Ab 100. A 1: 361d.

Da 16. San Francisco.

Variety **FENDLERIANA** Bebb. B 2:84. Parish, Er 3:60 Bear.

Variety **LANCIFOLIA** Bebb. B 2:84. Da 16. S.Ber. (Parish 546). A 1:361d.

Variety **TYFICA** B 2:84.

**S. LANCIFOLIA** And, Sal mon 34 f 23. B 2:84 as *lasianandra* var. *lancifolia*.

**SALIX LASIOLEPIS** Benth.

Tree or large shrub, 4-8 m hi, lvs oblg or somewhat broadest above the middle, obscurely and irr serrulate, dull g above more or less gray-pubescent beneath, 12-20 mm broad, 5-7 cm lg, on petioles 5-10 mm lg; aments appearing before the lvs, suberect; stam 2-4 cm lg; sta 2; pist 2.5 cm long or less; cap acute, smooth, sh-pedicelled; sty rather sh; stig erect.

erect.

Type locality: "Ad ripas fluviorum Salinas et Carmel prope Monterey, Cal."

Bth 335, Cov 199. Ha 71. Ab 101. Arroyo willow. Da 16. B 2:86. Greene, Cal ac b 2:412, Cruz. A 1:361.



SBER (Parish 675); Baja; Cruz; Da 16. San Francisco.

Variety **BIGELOVII** Bebb. B 2:86 (S. Bigelovii T.).

**S. LEMMONI** Bebb. B 2:88.

Variety **MELANOLEPIS** B 2:88.

Variety **MACROSTACHYS**. B 2:88.

Variety **SPHAEROSTACHYA**. B 2:88.

**SALIX LONGIFOLIA** Muhl.

LA; Cruz; CD; Baja.

Muhl, Neue Schrift Gesell Naturf Freunde Berlin 4:238 (1803). Br, Colo 229. Cov 199. Mex, La. A 1:361. B 2:84. Greene, Cal ac b 2:412 Cruz. DC 16:214.

Type locality: "ad Susquehannam" (near the Susquehanna river, Pa).

Lvs varying from linear to lanceolate, lg-acuminate, tapering at base, sessile or nearly so, 3-4" lg, 1-6 (cm 2-3)" broad; margin remotely mucronate-dentate or entire; stipules soon decid: aments linear-cylindric, borne on lateral lfy branchlets of the season, oft clustered at extremity: scales y'ish, villous, dentate, decid: cap oblg-conical, obtuse, sh'ly pedicelled, com tomentose; stig large, sessile.

Variety **ARGYROPHYLLA** And. B 2:85.

Kongl Sven Aked Handl, ser 4, 6:55 (1866). Da 16. Cov 199 near Visalia.

Type locality: on "one of the branches of the Oregon, the river Boisee, toward its junction with the Shoshonee."

*Salix argyrophylla* Nutt, Sylv 1:71 (1842-53).

Variety **EXIGNA** Bebb. B 2:85.

**S. LUCIDA** Muhl, Ges Nat Fr Neue Schr 4:239.

Variety **MACROPHYLLA** And, DC 16 (2): 205. B 2:84 as lasiandra var. lancifolia.

**S. LUTA** Nutt, Sylva 1:63 t 19. B 2:86 as cordata.

**S. MACROCARPA** Nutt, Ore. B 2:88.

**S. MACROSTACHYA** Nutt Sylva 1:72. B 2:85 as longifolia. Ab 101.

Shrub or sm tree, 1-6 m hi, oft in dense thickets; bark light brown, cinereous, young branches villous: lvs 5 cm lg, 1 cm wide, sessile or nearly so, oblanceolate or narly elliptic, acute at both ends, more or less villous-pubescent; stipules 0; aments on sh lfy lateral branches, 2-3 cm lg, densely fld, oblg: scales densely villous all over, oblg; fl crisp villous upon the lower half; cap clothed with lg lax hairs, closely sessile; sty evident; stig divided, linear.

Ab 101, Suggests that *S. Parishiana* is a synonym.

Variety **LEUCODENDROIDES** Rowlee.

Shrub 1-3 m hi; lvs 10-12 cm lg, 1 cm wide, densely w tomentose on both sides, largest remotely denticulate; aments cylindric, 4-5 cm lg, otherwise as in type. Ab 102, SBER valley.

**S. MICROPHYLLA** Schlecht, H & A bot Beech 310 t 70. B 2:85 as taxifolia.

**S. MONICA** Bebb. B 2:90.

**SALIX NEVADENSIS**.

"Aments sh, 6-8" lg, appearing with the lvs, ascending on lfy peduncles; scales oblg, obtuse, glab or subsilky in the male aments, light-colored; sta 3, free; capsules glab even when young, on pedicels  $\frac{1}{2}$ " lg; sty 0; stig sh and thick; lvs lance-linear,  $\frac{1}{2}$ -1" lg on fl'ng

specimens, acuminate, entire, silky-tomentose; stipules very minute. A slender shrub, 3-4° hi, with light-colored bark and y'ish foliage, growing in dry, sandy soil. It differs from *S. Hindsiana* in its more reduced habit, its silvery pubescence, narrower, more scarious, lighter-colored and glab scales, more slender and smoother capsules, and thicker and sh'er stigmas. At the base of the Washoe mts, near Carson City (1093 Watson), and in Central Nevada (Wheeler).—S. Watson. Am nat 7:302 (My 1873). B 2:85.

**SALIX NIGRA** Marsh. B 2:83.

Variety **VALLICOLA** Dudley.

Tree 8-12 m hi, with dark, rough bark; lvs g on both surfaces, glabrate, narly lanceolate, 5-12 cm lg, 8-12 mm wide, closely serrulate, acute or acuminate, nar'ed at base to petioles 4-6 mm lg, which are quite puberulent or nearly glab at maturity; stipules lanceolate when well developed, the larger 8-10 mm lg, all glandular toothed, oft with similar glands on lower surface and on serratures of young lvs; aments expanding with lvs, terminating the sh lateral branches, stam 3-6 cm, pist 2.5-5 cm lg; sta 5-11, their fl tomentose below; bracts pale, obovate or roundish, usually very tomentose; sty sh; stig 2, lobed; cap ovoid, glab or more or less pubescent, mostly 4-5 mm lg, from slightly longer to twice the length of the smooth pedicels. "The largest willow in southern Cal. Frequent along the Santa Ana River from Santa Ana to SBER; also along the San Dieguito and SD rivers in SD Co. The type of this heretofore undescribed willow is the author's No. 3256, collected along the Santa Ana river near Orange."—Ab 100.

**SALIX PARISHIANA** Rowlee.

Slender shrub, 1-3 m hi; young twigs cinereous strigose; lvs linear-lanceolate, minutely and remotely denticulate, 5-7 cm lg, 3 mm wide, silky-canescens when young, glab and somewhat coriaceous when mature, veins few but prominent; stipules 0; aments on lg lfy ped, 2-3 cm lg, upper lvs of branch much surpassing ament; fls dense; scales w densely villous all over, oblg, acute; fl scanty hairy at base; cap densely villous, oblg, closely sessile; sty distinct; stig linear. SBER (Parish). Ab 101.

**S. FENTANDEA** L, sp pl 1016. Eu.

Variety **CAUDATA** Nutt, Sylva 1:61 t 18. B 2:84 as lasiandra variety, Fendleriana.

**S. SCOULERIANA** Barratt, Hook Fl 2: 145. B 2:87 in part as flavescens.

**S. SESSILIFOLIA** Nutt, Sylva 1:66. B 2:85.

Variety **HINDSIANA** And, Sal mon 56 f 37. B 2:85. A 1:361.

SBER (Parish 640).

**S. STICHENSIS** Sanson, Bong Veg Sitcha. B 2:87. P 3:76. M 3:148 fdr.

Variety **ANGUSTIFOLIA** Bebb. B 2:87.

**S. SPECIOSA** Nutt, Sylva 1:58 t 17. B 2:84 as lasiandra.

**S. STAGNALIS** Nutt, Sylva 1:66. B 2: 87 as flavescens?

**S. SUBCORDATA** And. B 2:90.

**S. TAXIFOLIA** HBK. B 2:85.

**S. TENERA** And, DC 16 (2): 288. B 2: 90. Cascade mts. M 3:9 as *Cascadensis*.  
**S. VILLOSA** Hook, Fl 2:144. B 2:89 as *glauca* var. *villosa*.

Genus **SALSOLA** Linnaeus.

**SALSOLA TRAGUS** L.

Genus **SALVIA** Linnaeus.

Herbs or suffrutescent plants, aromatic and bitter, with clustered com showy fls: ex bilabiate, its upper lip 3-toothed or entire, the lower 3-cleft: cor deeply 2-lipped, erect, entire, emarginate or 2-lobed, com concave, the lower spreading, its middle lobe oft emarginate: anth-bearing sta 2, posterior pair 0 or rudimentary; fil com sh; connective of anth transverse, linear or filiform, bearing a perfect anth-sac on its upper end, its lower end dilated, capitate or sometimes bearing a sm or rudimentary anth-sac: ova deeply 4-parted; sty 2-cleft: nutlets smooth, com developing mucilage and spiral tubes when wetted.  
**S. APIANA** M 3:144 based on *Californica* Jepson (not Br), *Audibertia polystachya* Bth.

**S. AURICULATA** Und. Z 1:101 Tampico, Mex.

**S. BALLOTAEFLORA** Bth, Lab Gen et sp 270. B 1:600. Tex. Mex.

**S. BERNARDINA** Parish. A 1:107 fdr.

**S. CALIFORNICA** Br 2:197. Baja (Jepson Fl 460 = *apiana*.)

**SALVIA CARDUACEA** Benth.

Bth, Lab G et sp 302. B 1:599. Da 14. Ab 343. Par 312 t.

(Thistle-sage.)—Rather stout erect ann, 2-5 dm hi; st with a cluster of ample sinuate-pinnatifid spinulose-toothed lvs at base, these and the whole plant woolly and thistle-like; fls in 1-4 dense hd-like verticillate clusters, these 2-3 cm broad, equalled or surpassed by the ovate-lanceolate pectinate-toothed bracts; ex lg-woolly, many-nerved; cor light blue, 2.5 cm lg; upper lip erose-denticulate and cleft; lower with a large flabelliform fimbriately many-cleft middle lobe: fil very sh; lower arm of lg filiform connective bearing a polleniferous anth-cell.

**S. CARNOSA** Dougl, bot reg sub t 1469. Cov 175. (*Audibertia incana*).

Variety **COMPACTA** Hall. A 1:276 s.

Variety **FILOSA** G.

**S. CEDROSENSIS** Greene, Cal ac b 1: 212. P 1:206 Cedros. A 1:107 fdr. Magdalena Isl. Baja.

**S. COCCINEA** L. B 1:599.

**SALVIA COLUMBARIAE** Benth.

(Chia)—Slender ann, branching and lfy below, 2-5 dm hi, naked and ped-like above, more or less grayish pubescent with rather sh reflexed hairs; lvs rugulose, 1-2-pinnatifid into toothed or incised divisions; fls in 1-several dense verticillate clusters, these about 1.5-2 cm broad, scarcely equalled by rounded bracts; bracts tipped with a slender awn, sparsely ciliate on margins: ex-lobes plish tipped, upper lip large, arched, tipped with a pair of partly connate sh-awned teeth; cor deep blue, hardly exceeding ex, upper lip sm, notched, the lower with sm lateral lobes and a large unguiculate transversely oval 2-lobed

middle one.

Bth, Lab 302. Da 14. B 1:599. Greene, Cal ac b 2:409 Cruz. Br 1:215 Rosa. Ab 343. Par 302. Davy, Er 1:193 tetratological note. Ha 113. T, bot Mex bound 132.

**S. FULGENS** Cav, Ic 1:15 t 23. B 1:599.

**S. GOSSYPINA** Bth 330. B 1:599 as *carduacea*.

**S. HUMILIS** Greene. A 1:132 s.

**S. PLATYCHEILA** G 8:292. B 1:600.

**S. SONOMENSIS** Greene. A 1:132 s.

**S. SPATHACEA** Greene. A 1:132 s.

**S. SPLENDENS** Ker Gawl, bot reg t 687. B 1:599.

**S. VASEYI** M 3:126 based on *Audibertia* V (Porter, bot gaz 6:207). Ramona V (Briquet, Engler & Pr Natpfl 4: 287 et M 1:59).

**SAMBUS** Tourn. A 1:191d.

**S. CALLICARPA** Greene. Par 42.

**S. CANADENSIS** L. sp pl 269.

Variety **MEXICANA** Sargent, Sylva 5:88. Ha 121. Parish. Z 5:118, "not known south of Tehachapi."

**S. GLAUC** Nutt, T & G Fl 2:13. G, Syn Fl 1 (2): 9. Wat bot king 134. B 1: 278. Ore to Mex, Id, Nev. A 1:191d. Ab 380. Par 41. Greene, Cal ac b 2:399 Cruz. Br 1:211 Rosa. Da 7. B 1:278. Cov 117. Bloch, Er 2:40, "Saucu", notes medical value of fls. Ar M 3:1.

Type locality: "plains of the Oregon, near the Blue mts."

**S. COERULEA** Raf, Alsog Am 48 (1838). Greene, Er 2:52, "supercedes *S. glauca* Nutt."

**S. RACEMOSA** L. Eu. B 1:278. P 3:83. Z 1:83.

Shrubby, mostly glab: lfts 5-7, thin, obl-g-lanceolate, much acuminate, very sharply serrate: cyme ovate or pyriform: fr bright red; its nutlets obscurely rugose: pith of shoots brown. Alk-Cal. Variety **PUBENS**. Atlantic states. B 1: 278.

**S. PUBENS** Mich. B 1:278 as *racemosa* var. n.

**S. MEXICANA** Presl, DC 4:322. = *glauca*? B 1:278.

**S. VELUTINA** D & H. Phil ac J, ns, 3:39. Pac Ry R. 5:8. M 3:1.

Genus **SAMOLUS** Linnaeus.

Brook weed. Low and glab caulescent herbs with alt lvs: fls sm, w, 5-merous, in terminal racemes: ex adherent to base of ova, mmpanulate: cor nearly campanulate: sta 5, borne on tube of cor, fil sh; a 2d sr of sta represented by 5 sterile fl or staminodia inserted in sinuses of cor and alt with anther-bearing sta: cap opening at the apex by 5 valves.

**S. HERACTEATUS** HBK. Baja.

**SAMOLUS FLORIBUNDUS** HBK.

A 1:198d.

Abrams, Fl LA 299. S Ber valley.

*Samolus Valerandi* L. var. *Americana* A. Gray.

Davidson, Pl LA Co 11.

Greene, Cal ac b 1:406.

**SAMOLUS VALERANDI** Linn.

P 1:470.

Variety **AMERICANUS** G. Man ed 2, 274. Da 11. Greene, Cal ac b 2:406 Cruz. A 1:199 s.

**SANGUISCREA** Rupp ex L, syst ed 1



(1735) = *Poterium* fide IK.

**S. ANNUA** Nutt, T & G Fl 1:429. B 1:186 as P: a.

**S. MICROCEPHALA** Presl, Epim bot 202. B 1:186 as P: annuum.

**S. MYRIOPHYLLA** Braun & Bouche. B 1:186 as P: annuum.

**S. OFFICINALIS** L, sp pl 116. B 1:186 as P: o.

**SANGUINARIA** Dill ex L, syst ed 1 (1735).

**S. AUSTRALIS** P 5:307.

**S. CANADENSIS** L, sp pl 505. P 5:307.

**S. DILLENIANA** P 5:307.

**S. GRANDIFLORA** Rosc Fl III Seasons t 8, P 5:308 = *canadensis* fide IK.

**S. MESOCHORA** P 5:308.

**S. EOTUNDIFOLIA** P 5:307.

**SANICULA** Tourn. A 1:139d.

**S. ABCTOPOIDES** H & A bot Beech 141. B 1:256.

**S. ARGUTA** Greene. A 1:140 fdr. Ab 279. SBar-SD.

**S. BIPINNATIFIDA** Dougl, Hook Fl 1: 258 t 92. T, bot Wilkes exp 314. Ab 279.

B 1:256. 2:451. Da 7. Er 1:6. A 1:141d. McClatchie, Er 2:123. Pasadena, Jepson, Er 1:63 Kern to Butte Co. M 3:71.

**S. BIPINNATA** H & A, bot Beech 347. B 1:257. 2:451. Ab 280.

Slender, 2-4 dm hl, from a slender fusiform rt: lvs twice or thrice pinnate, with divisions not at all decurrent on rachis, cuneate-oblg to ovate, incisely and mucronately toothed; umbel 3-4-rayed; inv of lf-like bracts; involucl of a few sm bractlets more or less united; fls y: fr 3 mm lg, with strong tubercles tipped with sh hooked bristles; sd-face deeply sulcate, sometimes inclosing a central cavity, with a central longitudinal ridge.

**S. LACINIATA** H & A bot Beech 347. Greene, Cal ac b 3:399 Cruz. Ab 279. Br Z 1:114 Cat. A 1:140d.

**S. MARITIMA** K, ex Wat B 2:451. Cur 1: 138.

Greene, P 1:269, describes the type locality and the only one known as "a bit of meadow land between Alameda and Fruitvale, toward the bases of the Oakland hills," Cal, associated with *Ranunculus Bloomeri*.

**S. MENZIESII** H & A 1:140d. Ab 278. P 1:269 as ann. Da 7. B 1:256, 2:451.

**S. NEVADENSIS** Wat 11:139. B 1:256, 2: 451. Er 1:6. Ab 279. M 4:66.

Low, with very sh sts, the num stoutish ped arising from near base, 2 dm hl or less; lvs ternate, the divisions oblg-ovate, 3-6-lobed, seg lobed or toothed; umbels with 3-10 rays; inv of pinnatifid lf-like bracts; involucl of sm, oblg acute, more or less united bractlets; frng rays 1.5-3.5 cm lg; fls y, sterile ones on pedicels 2-3 mm lg; fr bristly all over, 3 mm lg; sd-face concave.

**SANICULA NEMORALIS** Greene.

"Erect, rather slender, a ft hl, from a perpendicular rt: lvs mostly radical, bipinnately 3-7-parted, divisions decurrent upon rachis as a nar entire wing; the several ascending branches bearing compound umbels with elongated rays: fls few in the hd, y: fr sm, broader than lg, the whole surface covered with uncinat prickles which are strongly

fistulate-enlarged or inflated from base to near middle."—Greene, Er 1:6. Collected by Bolander at the Big Trees and in the Yosemite Valley.

**S. NUDICAULIS** H & A, bot Beech 142. B 1:256 as *lacinata*. A 1:140 as *Menziesii*.

**SANICULA SAXATILIS** Greene.

Sts many, depressed, a ft lg, from a fleshy napiform rt of the size of a walnut: lvs ternately pinnate, the ultimate seg broad, coarsely toothed; fig branches repeatedly dichotomous, with hds (pedicellate) in all the forks; involucl sm, of very unequal foliaceous entire or toothed bractlets; pet salmon-color; anth y; sterile fls on lg pedicels: fr strongly tuberculate, the tubercles of upper part ending in a broadly subulate incurved point."—Greene, Er 1:6-7. Mt. Diablo.

**SANICULA SEPTENTRIONALIS** Greene

"Erect, slender, simple or sparingly branching, scarcely a ft hl: lvs few and sm (1" lg); radical of rounded general outline (as broad as lg), the ternate-lobed lfts obovate; cauline relatively longer and of more deltoid outline: umbels sm of only 2 or 3 sh slender simple rays: fls y: fr prickly thruout."—Greene, Er 1:6. Vancouver Isl (Macoun).

**S. TUBEROSA** T. B 1:257. 2:451. Da 7. Er 1:6. Ab 280. A 1:141d.

**SANTOLINA** Tourn ex L, ed 1, 248 (1737).

**S. SUAVEOLENS** Pursh, Fl 2:520. B 1: 401 as *Matricaria discoidea*.

**SAPIUM** P. Br. Br Hist Jamaica 338 (1756).

**S. ANNUUM** T, Mex bound 201. B 2:72 as *Stillingia* a.

Genus **SAPONARIA** Linnaeus.

L, syst ed 1 (1735).

**S. OFFICINALIS** L, sp pl 408. Eu. B 2:434.

**SAPONARIA VACCARIA** Linn.

L, sp pl 409. Eu. B 2:434.

**SARACHA** Ruiz & Pavon, Prod 31 t 34 (1794).

**S. ACUTIFOLIA** Miers, Ann & Mag Nat Hist, sr 2, 3:449. B 1:540 as *Chamaesaracha coronopus?* et 541 as *Physalis lobata?*

**S. CORONOPUS** G 10:62. B 1:540 as *Chamaesaracha* c.

**S. NANA** G 10:62. B 1:540 as *Chamaesaracha* n.

**SARCOBATUS** Nees, Neuw Reise N-Am 2:446 (1841).

**S. MAXIMILIANI** Nees, lc, 447. B 2:59 as *vermiculatus*.

**S. VERMICULATUS** T, Emory rec 149. B 2:59. = *Maximilianii* fide IK.

Genus **SARCODES** Torrey.

**SARCODES SANGUINEA** Torrey.

Torrey, Pl Frem 18 (1853).

B 1:462. Ab 295. Da 10. Par 368 t. A 1: 245d.

Coville, CNH 4:146.

Hall, U 106. Snow plant.

Genus **SARCODES** R. Brown.

**S. HETEROPHYLLUM** E. T. Pac Ry R 5:362. B 1:478. 2:464. = *Philibertia linearis* fide IK.

**S. LINEARE** Decne in Bth 25. B 2:464 s.

= *Philibertia* l fide IK.

**SARRATIA** Moq, DC 13 (2): 233, 268 (1849). = *Amaranthus* fide IK.

**S. BERLANDIERI** Moq, lc 268. = *A. polygonoides*.

Variety **FIMBRIATA** T. Mex bound 179. B 2:42 as *A. f.*

Genus **SAXIFRAGA** Linnaeus.

Tourn ex L, Gen, ed 1, 131 (1737). A 1: 320d.

**S. AESTIVALIS** F & M. B 1:195 s.

**S. BEYOPHOEA** G 6:533. B 1:194.

**SAXIFRAGA CALIFORNICA** Greene. P 1:286. A 1:320 fdr. Ab 190.

**S. ELATA** Nutt. A 1:326 as *Therofon elatum*.

**S. HETERANTHA** Hook Fl 1:252 t 78. B 1:195. = *Mertensiana* fide IK.

**S. HIERACIFOLIA** Porter, Hayden. R (1871) 782. (B 1:194 as *integrifolia* as to var: in G. Am J sc 33:409).

**S. INTEGRIFOLIA** Hook Fl 1:249 t 86. B 1:194.

**S. LEUCANTHEMIFOLIA** Michx, Fl 1: 260. B 1:195.

Variety **INTEGRIFOLIA** Engler, Saxif 135. = *bryophora* fide. B 1:194.

**SAXIFRAGA MALVAEFOLIA** Greene. Torr cl b 9:121; Cal ac b 2:397 Cruz. Rosa. Z 1:136 s.

**S. MARSHALLII** P 1:159. Humboldt Co. S. **MERTENSIANA** Bong; mem ac

Petersb sr 6, 2:141 (1835). B 1:195. M 4:9.

**S. NIVALIS** L, sp pl 401. P 3:33. B 1: 194 s. Parry, Wyo 6.

**S. PARRYI** T, Mex bound 69. B 1:193. A 1:326d.

**S. PELTATA** T ex Bth 311. B 1:193.

**S. PUNCTATA** L, sp pl 401. B 1:195. Ckll W 5:11.

**S. PARVIFOLIA** P 3:116. ....

**S. RADULINA** P 3:308.

**S. RHOMBOIDEA** P 3:343.

**S. RANUNCULIFOLIA** Hook. B 2:445. A 1:326 as *Therofon elatum*. B 1:196 as *Boykinia occidentalis*.

**S. REFLEXA** Hook, Fl 1:249 t 85. Br 1:203 Cruz. A 1:326.

**S. TOLMIEI** T & G Fl 1:567. B 1:195.

**S. VIRGINIENSIS** Boland Cat 11. B 1: 194. P 1:286 as *Californica*. A 1:326.

**SCARIOSIA** L, syst ed 1 (1735).

**S. ATROPURPUREA** L, sp pl 100. Vasil, Z 1:86, "naturalized in mts north of Pescadero," etc. = *maritima* fide IK. M 3:77.

**S. MARITIMA** L. Cent Pl 2:8.

**SCANDIX** L, syst ed 1 (1735).

**S. PECTEN-VENERIS** Dod, Pempt 689; L, sp pl 256. P 1:270 as *naturalized* in Napa valley, Cal.

**SCHUCHZERIA** L, syst ed 1 (1735).

**S. PALUSTRIS** L, sp pl 338. B 2:199.

**SCHINUS** L, Gen, ed 1, 358 (1737).

**S. MOLLE** L, sp pl 388. B 1:109. cult.

**SCHISTIDIUM** B 2:377 as *Grimmia*.

**S. AFOCARPUM** Bruch & Schimp. B 2: 377 as *G. a.*

**S. CONFERTUM** Bruch & Schimp, Bry Eu t 232. B 2:377 as *G. c.*

**S. SUBSESSILE** Bridel. B 2:361 as *Pottia s.*

**SCHIZOCARYPA** Spach, Nov Ann mus Par 4:325 (1835). = *Gaura* fide IK.

**S. MICRANTHA** Spach, lc, 332. B 1:234

as *G. parviflora*.

**SCLEROCARPUS** Jacq, Ic Pl Rar t 176 (1782), et act Helv 9:34 t 2 (1787).

**S. EXIGUUS** Smith, in Rees Cyc 31: N3. B 1:360 as *Madia filipes*.

**SCLEROCHLOA** Beauv, Agrost 97 (1812).

**S. CALIFORNICA** Munroa, Bth 342. B 2:309 as *Atropis c.*

**S. PROCUMBENS** Beauv. B 2:309 as *Atropis p.*

**SCHLEROPODIUM** (Moss).

**S. CAESPITOSUM** Bruch & Schimp. B 2:414 as *Hypnum c.*

**S. ILLICEBRUM** Schimp, Bry Eu t 557. B 2:415 as *Hypnum l.*

**SCHMALTZIA** Desvaux.

*Turpinia* et *Lobadium* Raf. Gifts 1:128.

**S. AFFINIS** Gifts 1:135. Ut.

**S. ANISOPHYLLA** Gifts 1:136.

"Dwarf, stout rigid sh-branched desert shrub; twigs for 2 seasons puberulent, afterwards gray, glabrate: foliage at least half-grown at fig time, sm, distinctly trifoliate but lateral lfts sm and degenerate, never = to each other in size, the largest not half the size of the terminal, this obovate-cuneiform, lightly 3-lobed and obtusely so: sm round capitiform spikes many; bracts transverse-rugose in the middle, only minutely and obscurely ciliate."—Gifts 1:136. Panamint mts, Cal.

**S. ANOMALA** Greene.

"Growing twigs soft-pubescent with sh mostly deflexed hairs: foliage large, as nearly quinate as that of *S. quinata*, more or less densely soft-pubescent on both faces; terminal lft of deltoid-ovate cut, 1½" lg and as wide, incisely cleft into 3 seg all doubly crenate and obtuse; lateral lfts doubly crenate; infl seemingly a panicle of alt divaricate sh spikes; bracts villous-tomentulose from base to summit but not ciliate: immature fr densely wavy-granular and sparsely soft-bristly."—Gifts 1:139. Butte Co, Cal.

**S. AROMATICA** Small. Gifts 1:129.

**S. AERARIA** Gifts 1:130. Ind.

**S. BAKERI** Gifts 1:132. Colo.

**S. BOTRYOIDES** Gifts 1:138. Ar.

**S. CISSODES** Gifts 1:136. Ar.

**S. COGNATA** Gifts 1:141. Colo.

**S. CRATAEGIFOLIA** Gifts 1:130. Vt.

**S. CRENATA** Gifts 1:128 based on *Toxicodendron c.* (Mill, Diet n 5). Hhus suaveolens Alt Kew 1:368. Ga.

**S. CRUCIATA** Greene.

"Rigidly and divergently branching, growing twigs pubescent: lvs dark g but glaucescent above, lighter beneath yet not there glaucescent, pubescent along the veins, upper face merely scaberrulous: terminal lft 1" lg and same breadth in middle, somewhat cruciform above the abruptly cuneate base, showing 3 broad lobes, laterals divaricate, all more or less crenate-toothed or lobed; lateral lfts round-obovate, crenate; bracts of spike pubescent only at base, naked margin subscarious: fr waxy-granular, glab."—Gifts 1:139. SD. Co.

**S. ELEGANTULA** Gifts 1:136. Ar.

**S. EMORYI** Gifts 1:133. NM. Ar.

**S. FORMOSA** Gifts 1:131. Ill.

**S. GLABRATA** Gifts 1:132. So. Dak.



**S: GLAUCA** Gifts 1:138. Durango, Mex.  
**S: GLOMERATA** Gifts 1:140. Id.  
**S: GLOMERATA** Gifts 1:135. Nev.  
**S: HIRTELLA** Gifts 1:137. Ar.  
**S: ILLINOENSIS** Gifts 1:131. Ill.  
**S: LASIOCARPA** Gifts 1:141. Kans.  
**S: LEOCARPA** Gifts 1:133. NM. . . .  
**S: MALACOPHYLLA** Greene.

"Branches rather stout, soft-pubescent for 2 seasons: lvs of a rather light g, villous-pubescent on both faces; terminal lft 1' fully as broad in middle above the more or less sharply cuneate base, 3-lobed, terminal lobe with 3, each lateral with 2 broad obtuse teeth or lobes; lateral lfths half as large, round-oval or obovate, crenate-lobed around summit; spikes panicled at ends of branches: bracts tomentose across base, at apex glab, even as to margin: fr sm'ish, blobose, sparsely hirsute."—Gifts 1:138. LA.

**S: NORTONI** Gifts 1:132. Kans.  
**S: OREGANA** Gifts 1:140. Ore.  
**S: OXYACANTHOIDES** Gifts 1:134. Colo.  
**S: PULCHELLA** Gifts 1:134. Tex.  
**S: PUNCTICULATA** Gifts 1:137. Ar.  
**S: QUERCIFOLIA** Gifts 1:141. Kans.  
**S: QUINATA** Gifts 1:139 based on *Rhus trilobata* var: q (Jepson, Er 1:141).  
**S: RACHMULOSA** Gifts 1:142. Ar.  
**S: SABULOSA** Gifts 1:135. Tex.  
**S: SCABERULA** Gifts 1:138. Son.  
**S: SEBOTINA** Gifts 1:131. Mo.  
**S: SERRATA** Gifts 1:129. NY., Canada. north.

**S: SIMPLICIFOLIA** Gifts 1:135 based on *Rhus Canadensis simplicifolia* (Greene, T cl b 16:13).  
**S: STRAMINEA** Greene.

"Growing twigs puberulent; also foliage, but this not strongly so, glaucescent above, more so beneath: terminal lft 3-lobed and lobes crenate; laterals crenate: fls not y, only pale straw-color; bracts pubescent at base only, above glab and with margin not only naked but scarious: fr?"—Gifts 1:139. Along Lytle Creek, LA Co.

**S: SUBPINNATA** Gifts 1:133. Colo.  
**S: TRIDOPHYLLOIDES** Gifts 1:141. Okl.

**S: TRILOBATA** (Nutt) Gifts 1:132. Colo.  
**S: TRINERVATA** Gifts 1:137. Ar.  
**SCHMIDTIA** Trott, Fl Austr 1:12 t 451 (1811).

**S. UTRICULOSA** Sternb, Fl 2:6. B 2:267 as *Coleanthus*, subnulls.

**SCHOENOCRAMBE** P 3:127.

**S. LINIFOLIA** P 3:127.

**S. PINNATA** P 3:127.

**S. PYGMAEA** P 3:128.

**SCHOENOLIBION** Durand, Phil ac J, sr 2, 3:103 (1855).

**S. ALBUM** Dur, lc. B 2:159 as *Hastingsia alba*.

**SCHOENUS** L, Coroll Gen 2 (1737).

**S. HIGRICANS** L, sp pl 43. Ab 72.

**SCHIZONOTUS** G 12:66 (1876). P 2: 65-67 as *Solanoa*.

**S. PURPURASCENS** G. B 2:463. P 2:65 as *Solanoa* p.

**SCHOLLERA** Schreb.

**SCHOLLERA GRAMINIFOLIA** Willd. B 2:187. = *Heteranthera graminea* fide IK.

**SCHUBERTIA** Mirl. = *Taxodium*.

**S. SEMPERVIRENS** Spach. B 2:116 as *Sequoia* s.

**SCILLA** L, syst ed 1 (1735).

**S. ESCULENTA** Ker-Gawl, bot mag t 1574. B 2:158. = *Camassia Fraseri* fide IK.

### Genus SCIRPUS. Linnaeus.

Ann or per or oft rush-like sedges with lfy sts or lvs reduced to basal sheaths: spkt terete or somewhat flattened, solitary, capitate, spicate or umbellate, com subtended by a 1-several-lvd inv: scales spirally imbricated, com all fertile or lowest sometimes empty: fls perfect: perianth of 1-6 bristles or sometimes 0: sta 2-3. sty 2-3-cleft, not swollen at base, wholly decid from the ak or lvs base persistent as a subulate tip: ak triangular, lenticular or plano-convex. Bulrush.

**S. AMERICANUS** Pers. Ab 67. LA SD.

Per by lg rt-stock; sts sharply 3-angled, with concave sides, erect, 3-12 dm hi; lvs 1-3, narly linear, sh'er than st, keeled; inv bract solitary, lf-like, 4-10 cm lg; spk appearing as if lateral, sessile in capitate clusters of 1-7, acute, 3-16 mm lg; scales broadly ovate, brown, oft emarginate or sharly 2-cleft, midvein extended into a subulate awn, margins scarious, ciliate or glab; bristles 2-6, retrorsely barbed, sh'er than or equaling ak; sty com 2-cleft; ak obovate, plano-convex, smooth, dark brown, mucronate.

Synonymy: *S. pungens* Vahl.

**S. ACICULARIS** L. B 2:221 as *Eleocharis* a.

**S. APUS** G 10:78. B 2:224 as *Fimbristylis* a.

**S. ATROVIRENS** Pers. Ab 69. B 2:219.

Per by slender rt-stocks; sts 3-angled, rather slender, lfy, 6-12 dm hi; lvs elongated, nodulose, rough on margins, 6-12 mm wide, 1-2 com exceeding inf; inv lvs com several, unequal, the longer equaling or exceeding rays; umbel 1-2-compound or rarely simple; spkt ovoid-oblg, acute, densely capitate in 6's-20's at ends of rays or raylets; scales g'ish-brown, oblg, acute, midvein excurrent; bristles 6, retrorsely barbed above, naked below, about equaling ak; sty 3-cleft; ak oblg-obovoid, 3-angled, pale brown, dull.

**S. RADIUS** Presl, Rel Haenk 1:193. B 2:218 as *pungens*.

**S. CALIFORNICUS** Britton. Ab 68.

Much resembling *Scirpus lacustris* occidentalis in habit and size; sts obtusely 3-angled; inv bract very sh, stoutly subulate; umbel compound; spkt 6-10 mm lg, oblg; scales brown, ovate, awn-pointed by excurrent midvein; bristles sh'er than ak, rather stout, strongly ciliate at least below; sty 2-cleft; ak obovate, plano-convex, nearly w or brown, nar'd above into a sh point, contracted at base, 1-1.2 mm broad *Scripus* Tatora Kunth.

**S. CAPILLARIS** L. B 2:224 as *Fimbristylis* c.

**S. CARINATUS** G 7:392. B 2:217.

**S. CERNUUS** Vahl. Ab 67. LA, SBar. Sts tufted from fibrous RTS, slender, 5-20 cm hi, sheathed at base; upper

sheath bearing a sh slender lf; inv bract slender, 2-20 mm lg; spkt solitary, ovate to oblg-ovate, 3-5 mm lg; scales brownish with a pale midvein, concave; bristles 0; sty 3-cleft; ak 3-angled-obovoid, the sides convex, smooth or somewhat granular, dark brown, scarcely 1 mm lg. *Scirpus riparius* Spreng.

**S. CRINIGER** G 7:392. B 2:219.

**SCIRPUS LACUSTRIS** Linn.

B 2:217.

Variety **OCCIDENTALIS** S. Watson.

Da 18. Ab 68.

"Tule," com along streams.

Sts stout from creeping rt-stocks, terete or rarely obscurely 3-sided, 1-3 m hi, lfless or basal sheaths bearing a sh nearly terete lf; inv bract stout, sh'er than infi; spkt num, scattered or more or less clustered in an irreg compound umbel, oblg-ovoid, 6-10 mm lg; scales broadly ovate, obtuse, com pubescent; bristles 6, equaling or longer than ak, slender, retrorsely barbed; sty 2-cleft; tk obovate, plano-convex, abruptly mucronate, grayish.

**S. LENTICULARIS** T. Cyp 328. B 2:219 as *sylyaticus* var. *digynus*.

**SCIRPUS MARITIMUS** Linn.

L, sp pl 51. B 2:218. Da 18. Ab 68 as *robustus*.

**S. MICRANTHUS** Vahl, Enum 2: 254. B 2:220 as *Hemicarpha subsquarrosa*.

**S. MICROCARPUS** Presl, Rel Haenka 1: 195. B 2:219 as *sylyaticus* var. *digynus*. Ha 65. Ab 69. Pasadena (McClatchie).

Per; sts 6-12 dm hi, rather stout; lvs rough-margined, exceeding st; longer inv lvs usually exceeding infi; umbel 1-2-compound; spkt 3-25 together in capitate clusters at ends of com spreading raylets, ovoid-oblg, 3-4 mm lg, acute; scales brown, with a g midvein, blunt or subacute; bristles 4, barbed nearly or quite to base, somewhat longer than ak; sta 2; sty 2-cleft; ak oblg-obovate, nearly w, plano-convex or with a low ridge on back, pointed.

**S. NEVADENSIS** Wat, bot King 360. B 2:217.

**SCIRPUS OLNEYI** A. Gray.

G, Bost J nat hist 5:238. B 2:218. Da 18. Ab 68.

Per by lg stout rt-stock; sts stout, 6-25 dm hi; sharply 3-angled with concave sides; lvs 1-3, 3-12 cm lg, or sheaths sometimes lfless; inv bract stout, erect, 1-3 cm lg; spkt appearing as lf lateral, capitate in dense clusters of 5-12, oblg or obovoid-oblg, obtuse, 5-8 mm lg; scales oval or orbicular, dark brown with a g midvein, emarginate or mucronulate, glab; bristles com 6, slightly sh'er than or equaling ak, retrorsely barbed; sta 3; sty 2-cleft; ak obovate, plano-convex, brown, mucronate.

**S. PALUSTRIS** L. sp pl 47. B 2:22 as *Eleocharis* p.

**S. PACIFICUS** M 4:43.

**S. PARVULUS** Roem & Sch, syst 2:124. B 2:221. = *nanus* fide 1k.

**S. PAUCIFLORUS** Lightf, F 1 Scot 2: 1078. B 2:221 as *Eleocharis* p. Parish. Er 3:59 Bear.

**S. PSEUDOTRIQUETER** Steud. Syn. Pl Cyp 86. B 2:218 as *Tatora*. = *riparius* fide 1k.

**SCIRPUS PUNGENS** Vahl.

Br 1:217 Rosa. B 2:218, s. Ab 68 s.

**S. PYGMAEUS** G 7:392. B 2:217 as *riparius*. = *cernuus* fide 1k.

**SCIRPUS RIPARIUS** Spreng.

Syst 1:208. Da 18. P 1:93 Mlg, 208 Cedros. B 2:217, 218 s. Ab 67 as *cernuus*.

**S. ROBUSTUS** Pursh, Fl 1:56 Ab 69. B 2:219 s. = *maritimus* fide 1k.

Per by large rt-stocks; sts stout, sharply 3-angled with flat sides, smooth, 6-15 dm hi; lvs equaling or exceeding st, smooth, 5-10 mm wide, midvein prominent; inv lvs 2-4, elongated, erect, similar to those of st, often 3 cm lg; spkt in a dense, oft compound terminal cluster of 6-20, ovoid-oblg, obtuse or subacute, 16-24 mm lg, 8-10 mm broad; scales ovate, brown, puberulent, lacerate or 2-toothed, midvein excurrent into an at length reflexed awn; bristles 1-6, sh'ter than ak, or o; sty 3-cleft; ak compressed, flat on the face, convex or with a low ridge on back, obovate-orbicular, dark brown, shining, 3 mm lg.

Synonymy: *S. maritimus* B 2:218 not L. **S. EOTHEN** Hoppe. B 2:218 as *pungens*.

**S. SAVII** Sebast & Mourl, Fl Rom Prod 22. B 2:217 as *riparius*.

**SCIRPUS SETACEUS** Linn.

L, sp pl 49.

Variety Boeckeler, Linnaea 36:500 = *riparius* fide. B 2:217.

**S. SUBSQUARROSUS** Muhl, Desc Gram 39. B 2:220 as *Hemicarpha* s.

**SCIRPUS SYLVATICUS** Linn.

B 2:219.

Variety **ATROVIRENS** Boeck. B 2:219 as sp.

Variety **DIGYNUS** Borch.

B 2:219. Mc Clatchie, Er 2:78 Pasadena.

**S. TATORA** Kunth, Enum 2:166. Da 18.

B 2:218. Ab 69. = *Californicus*.

**S. TRIQUETER** T. Pac Ry R 4:153. B 2:218 as *Olneyi*?

**S. VALIDUS** Vahl. B 2:217 as *lacustris*

**SCOLIOPUS** T. Pac Ry R 4:145 t 22 (1856).

**S. EIGELOWII** T. lc. B 2:180. Par 262 t. M 3:74.

**S. HALLII** Wat 14:272. B 2:180.

**SCOLEPENDRIUM** P 4:107.

**S. VULGARE** P 3:153.

**SCORZONELLA** Nutt. Am phil sc tr ns, 7:426 (1841). = *Microseris* fide 1k.

**S. BOREALIS** P 2:19, based on "Apargia borealis Bong, Veg Sitcha 146; Leontodon boreale DC 7:102; Apargidium T & G Fl 2:474.—Ripe ak \*\* leave no doubt that it belongs to Nuttall's genus *Scorzonella*."

**S. GLAUCA** Nutt. lc. = M: *leptosepala* fide 1k.

**S. LACINIATA** Nutt. lc. B 1:424 as M: 1.

**S. LEPTOSEPHALA** Nutt. lc. B 1:425 as M: 1.

**S. NUTANS** Hook, Lond J bot 6:253. B 1:424 as M: n.

**S. SYLVATICA** Bth 320. B 1:424 as M: s.

**Genus SCROPHULARIA** Tournefort.

Per strong-smelling herbs, with mostly opp large lvs, and sm fls in terminal panicked cymes or thyrses; cx 5-parted, lobes mostly obtuse; cor irreg, tube globose or oblg, not gibbous or spurred



at base, limb 5-lobed, upper lobes longer, erect, lateral ones ascending, lower spreading or reflexed: sta 5, 4 anther-bearing, didynamous, declined, 1 sterile reduced to a scale on roof of cor-tube; anth-sacs confluent into 1: sty filiform; stig capitate or truncate: cap ovoid, septically dehiscent: sds rugose.

**SCROPHULARIA CALIFORNICA**

Linnaea 2:585 (1827). Cov 169 coso mts, etc. Ab 359. Ha 120. Br, Z 1:112 Cat. Jepson, Er 1:23 t 4 (tetratology). B 1:552. Da 13. Par 348 t.

Sts erect, 1-2 m hi, glab below, above finely glandular-pubescent: lvs ovate, cordate at base, serrate or incised-serrate, 6-18 cm lg; fls about 8 mm lg; col dull r. Nev; Baja!

Type locality: "Ad portum St. Franciscus."

Variety **FLORIBUNDA** Greene, Man 273:—"More slender; the herbage light g; lvs more sharply deeply and incisely toothed; branches of the panicles greatly elongated and remarkably fluxuous as well as very many-fld. Hills of the interior."

**SCROPHULARIA GLABRATA** Davidson.

"Per light g glab; the whole upper part of the pl studded with microscopic glands: sts slender, 2° hi, much branched; lvs ovate lanceolate, coarsely dentate, 1-1½' lg, acuminate at apex, nard at base, not prominently nerved, petioles ½' lg; fls dull p in almost leafless thyrses averaging 6' in length; bractlets mostly opp, slender ascending; cx ovate, acute sh' r than tube; cor dull, p not contracted, upper lip erect, lobes rounded, sterile sta obovate p; cap ovate acute—Ar. Mt streams at Metcalf at 4000-5000° alt. This sp is readily distinguished from all other Scrophulariae by the shape of lf and total lack of hairs on any part of plant."—Da, SCA b 1:26 f 3. **S. NODOSA** L, sp pl 619. Parry. Wyo 17. B 1:552, s.

**SCOULERIA** Hook. B 2:377 as Grim-mia.

**S. AQUATICA** Hook, bot misc 1:33 t 18. B 2:377 as G: Scouleri.

Genus **SCHOENUS** Linnaeus.

Ours per herbs from rtstocks, with slender erect tufted sts and slender subterete basal lvs: inv bract erect appearing as a continuation of the st: spkts sessile in capitate lateral clusters, few fld: scales imbricated in 2 rows, lower ones empty, upper bearing perfect fls: perianth of 6 scabrous or pubescent bristles: sta 3: sty 3-cleft, not dilated at base: ak more or less 3-angled, with a very sh beak.

**S. NIGRICANS** L. Ab 72.

Sts tufted, slightly compressed, slender, 5-7 dm hi; lvs rigid, subterete, channeled, rough on margins, sh' r than the sts; sheaths bk; inv bract 3-5 cm lg; spkts capitate clustered, ovate lanceolate, compressed, 6-8 fld; rachis zigzag; scales ovate, acute, compressed, keeled, very dark brown; bristles 6, unequal, dilated at base, barbed above, lger than ak; ak globose-oblg, 3-angled,

w and shining.

Arrowhead Hot Springs, near SB, Parish. Otherwise known in N Am only from Fla.

Genus **SCUTELLARIA** Linnaeus.

L, syst ed 1. A 1:236d.

**SCUTELLARIA ANGUSTIFOLIA** Psh. Pursh, Fl 2:412. B 1:603. Par 276. A 1:237d. Cov 176. Frazier mt. Ha 113. skull-cap.

Type locality: "On the river Kooskoosky," now the Clearwater, Idaho.

Variety **CANESCENS** G. B 1:603.

**S. ANTIRRHINOIDES** Bth, bot reg, sub t 1493 n 35. B 1:603. 2:477.

**SCUTELLARIA BOLANDERI** A. Gray. G 7:387. B 1:603. A 1:237d. Ha 113. Jepson, Er 1:12.

Abrams, Fl LA 341. Moist woods, El Monte (Davidson).

**S. CALIFORNICA** G syn Fl 2 (1):381. B 2:477. Par 276.

**S. GALEBICULATA** L, sp pl 599. B 1:603.

**S. LATERIFLORA** L, sp pl 598. B 1:602.

**S. NANA** G 11:100. B 1:604.

**S. RESINOSA** Wat. B 1:603 as in part antirrhinoides.

**S. SANHEDRINSIS** M 1:31. Lake Co., Cal.

**S. VIAPUM** M 1:32 Sonoma Co., Cal.

**S. SYPHOCAMPYLOIDES** Vathek, bot Zelt 30:717. B 1:603 as angustifolia var, canescens G.

**SCUTELLARIA TUBEROSA** Benth.

Lab 441. B 1:603. Ab 340. Da 14. Br 1:204 Cruz. Par 276 t. A 1:237d.

**SEBASTIANA** Spreng, Neue Entdeck 2:118 t 3 (1821).

**S. BILOCULARIS** Wat 20:374. Baja.

**S. TRECULIANA** Muell Arg, DC 15 (2):1181. B 2:72.

**SEDUM** Tourn Ex L, syst ed 1 (1735). A 1:327d.

**S. BLOCHMANAE** Eastwood. A 1:90 s.

**S. COTYLEDON** Jacq. Eclog Pl 1:27 t 17. B 1:212 as Cotyledon caespitosa.

**S. DEBILE** Wat, bot King 102. B 1:210.

**S. DOUGLASII** Hook, Fl 1:228. B 1:210.

**S. EDULE** Nutt, T & G Fl 1:560. B 1:211 as Cotyledon e. A 1:92 fdr, as Stylophyllum e.

**S. FORRERI** P 1:158.

**S. OBTUSATUM** G 7:342. B 1:209, 2:446. Ab 184. A 1:165 s, 327d as Gormaniana obtusata.

**S. OREGANUM** Nutt, T & G Fl 1:559. B 1:209.

**S. PRINGLEI** Wat 23:273. P 1:225 as Forreri.

**S. PUMILUM** Bth 310. B 1:210.

**S. RHODANTHEM** G, Am J sci, sr 2, 33:405. Parry, Wyo 7.

**S. RHODIOLA** DC l Fr 4:386. B 1:209. = roseum Scop fide IK.

**SEDUM SPATHULIFOLIUM** Hook. Fl 1:227. B 1:209, 2:446. Ab 184. Par 170. A 1:93d.

**S. STENOPETALUM** Pursh, Fl 1:324. B 1:210. Parry, Wyo 7, 14. Ckll W 5:11.

**S. VARIEGATUM** Wat 11:137. B 1:210. Da 6. A 1:91 as Hasseanthus variegatus.

**SARCOSTEMMA** R Br. Wern sc mem 1:50 (1809).

**S. HETEROPHYLLUM** E ex T, Pacific

Ry R 5:364. = *Philibertia linearis* fide IK.  
**S. LINEARE** Decne in Bth 25. = *Philibertia linearis* fide IK.

Genus **SELINUM** Linnaeus.

A 1:270d.

**SELINUM CAPITELLATUM** B & H.

Gen 1:319. B 1:265, 2:451. A 1:270, 271.

See *Sphenosciadium capitellatum*.

Oregon; Nevada; Jac (Parish 936).

Stem square: fls dull p, 6-8 mm long.

**S. DAWSONI** Coulter & Rose. W 5:19. Yukon.

**S. ERYNGIIFOLIUM** P 2:102. Ha 99. Coulter & Rose, mon 128 (1900) as *Sphenosciadium* e.

**S. GRAYI** Coulter & Rose. W 5:19. Colo. (S. Gmelini Porter & Coulter.)

**S. KINGII** Wat, bot king 126. B 1:265.

**S. PACIFICUM** Wat 11:140. B 1:265.

**S. TEREBINTHINUM** Hook, Fl 1:266 t 95. B 1:266 as *Cymopterus terebinthinus* T & G.

**SEMPERVIVUM** Rupp ex L, syst ed 1 (1735).

**S. TECTORUM** L, sp pl 464. Eu. B 1:208.

**SENDELLERA** DC mem sc hist nat Par (1799) 140 t 8, 9.

**S. DIDYMA** Pers, syn 2:185. B 1:48.

**S. PINNATIFIDA** DC lc, 144 t 9. B 1:48.

Genus **SENECIO** Linnaeus.

Ann or per herbs or shrubs, with alt or basal lvs, and solitary corymbose or paniculate many-fld hds of both tubular and ray-fls or only tubular, in ours y: inv cylindric or campanulate, its principal bracts in 1 sr, distinct or united at the base, com with some sh'er outer ones: receptacle flat or somewhat convex, mostly naked: rays when present pist: disk-fls perfect, 5-toothed: ak terete or those of marginal fls somewhat compressed, 5-10-ribbed, papillose, or canescent and com emitting a pair of spiral threads after wetting: pap copious, of w scabrous or smooth capillary bristles.

**S. ACCEDENS** P 3:105. Colo.

**SENECIO AMMOPHILUS** Greene.

Cape San Quintin, Baja (Greene).

**S. APLECTENS** G, Am J sc sr 2, 33: 240. P 4: 119. Parry, Wyo 17.

**S. ANACLETUS** P 4:307 based on *Toluccanus* var. *microdontus* G, syn Fl 1 (2): 388. Colo. Mex. (S. *microdontus* Heller not Baker.)

**S. ANDINUS** Nutt Am, phil sc tr 7:409. B 1:414. Parry, Wyo 18. Nev. = *serra* Hook fide IK.

**S. ANHANACTIS** P 1:220 based on *syliaticus* B 1:410 (not L). SF.

**S. ARENICOIDES** DC 6:426. B 1:414.

**S. ATRIPHANUS** P 1:174. Obispo.

**S. ATRATUS** P 3:105, 169. Colo. Ut.

**S. ATRIPLEXIFOLIUS** Hook Fl 1:332. P 3:182 as *Mesadenia atriplexifolia*.

**S. AUREUS** L, sp pl 870. B 1:411.

Variety **MULTILORATUS** G, B 1:411. Nev. Ut.

Variety **BALSAMITAE** T & G. B 1:412. Ore.

Variety **EOREALIS** T & G. B 1:412. Nev.

**S. BERNARDINUS** Greene.

"Tufted per  $\frac{1}{2}$ -1" hl, with hoary-tomentose herbage: crowded lvs of sh

caudex subcoriaceous, persistent thru winter, glabrate, of round-obovate outline, seldom  $\frac{1}{2}$ ' lg., on slender petioles of more than 1'; lower cauline cuneate-obovate, upper spatulate, all with a few coarse teeth at least at obtuse apex: hds nearly  $\frac{1}{2}$ ' hi, 3-7 in a corymb; inv nearly cylindrical, its 12-15 rather broad lanceolate bracts floccose-tomentose: rays rather ample and showy y." — P 3:298. SBer mts, 6500' (S. B. Parish), distributed as Nev-Mexicanus.

**S. BIGELOVII** G, Pac Ry R 4:111. P 4: 117, 118, NM only.

**S. BLITOIDES** P 4:123. Colo.

**SENECIO BLOCKMANAE** Greene.

"Tufted per; st erect, 3 or 4" hi, simple and lfy up to the fastigate-corymbose summit; herbage glab, heavy-scented: lvs linear-filiform, entire, 2-4' lg, recurved or deflexed: hds cylindrical,  $\frac{1}{2}$ ' hi or more; rays 5-8, light y: ak hoary with a sh strigulose pubescence: pap copious, very w and soft. Plentiful along the Santa Maria river, San Luis Obispo Co, Cal. Miss Blochman; flowering in O and N." — Greene, Er 1:7. **S. BOLANDERI** G 7:362. B 1:411.

**SENECIO CALIFORNICUS** DC.

DC 6:426, Ab 439. Da 10. B 1:410.

Ann glab or becoming so, slender, 1.5-4 dm hi; lvs lanceolate in outline, varying from denticulate to pinatifid, lobes sh, obtuse, all but lowest sessile and auriculate-clasping, 2.5-5 cm lg; inv 6-8 mm hi, its bracts nar; rays oblg, 6-8 mm lg, light y: ak canescent.

SBer to Santos!

**S. CANDIDISSIMUS** P 4:110. Chih.

**S. CANO** Hook Fl 1:333 t 116. Parry, Wyo 14. B 1:412. P 4:111.

**S. CORTHAMOIDES** P 4:122. Colo.

**SENECIO CEDROSENSIS** Greene.

Greene, Cal ac b 1:194. P 1:205.

Cedros Island (Greene).

**S. CERNUUS** G. P 4:118 as *pusidicus*.

**S. CILORANTHEUS** P 4:118. Colo.

**S. CINERARIA** DC 6:355. B 1:410. Dusty

Miller, cult. Eu.

**S. CLARKEANUS** G 7:362. B 1:412.

**S. CLEVELANDI** Greene, Torr cl b 10: 87. Jepson. Er 1:12. Clear Lake, Cal.

**S. COGATUS** P 4:114. Colo.

**S. COLUBELIANUS** P 3:170. Brit Columbia.

**S. COMPACTUS** Kirk, New Zeal Inst tr 12:395 (1879). of Rydb = *densus*).

**S. CONDENSATUS** P 3:298.

**S. CORDATUS** Nutt. B 1:413 as *lugens* var. *exaltatus*.

**S. CORONOPUS** Nutt. B 1:410 as *Californicus*.

**S. CROCATUS** Rydb, Torr cl b 24:299, based on *aureus* variety *croceus* G. P 4: 114 as a *nomen nudum*.

**S. DENSUS** P 4:226 (*compactus* Rydb, Torr cl mem 5:342, not Kirk).

**S. DIMORPHOPHYLLUS** P 4:109. Colo.

**SENECIO DOUGLASHI** DC.

De 6:429. B 1:411. Cov 139. Da 10. Ab 440. Greene, Cal ac b 2:404, Cruz.

Suffrutescent, com about 1 m hi, branching from base, wish-tomentose or becoming glabrate; lower lvs pinnately divided into about 5 narly linear lobes, uppermost entire, all with revolute margins; hds rather few, corymbose, 10-15



mm hi; rays light y, 10 mm lg; ak hoary with a sh pubescence.

Lake Co to Baja; CD! Neb.; Texas; Cruz.

**SENECIO EURYCEPHALUS** T-G.

T & G, Pl Fendl 109. Jepson, Er 1:13. Da 10. B 1:411. Cov 139.

Variety **MAJOR** G Pac Ry R 4:111. M 1:118 as sp. B 1:411. Calaveras Co, Cal. **S. EXALTATUS** Nutt, Am phil sc tr, ns, 7:410. B 1:413 as lugens var. exaltatus. P 3:171.

Variety **UNIFLOSCULOSUS** G, Pac Ry R 4:111. B 1:414 as aronicoides. **S. FENDLERI** G, Pl Fendl 108. P 4:112, Wyo—NM. Ckl W 6:11. B 1:411 sub aureus.

**S. FILIFOLIUS** Nutt, Am phil sc tr, ns, 7:414. B 1:411 as Douglasii.

**S. FLAVULUS** P 4:108. Colo.

**S. FLOCCIFERUS** DC 6:426. B 1:410, 434 as Malacothrix saxatilis (M: obtusa fide IK).

**S. FRANCISCANUS** P 2:19, Mt SF, Ar. **S. FREMONTII** G, Am ac mem, ns, 4: 108, NM. P 4:122. B 1:412, 618.

Variety **OCIDENTALIS** G, B 1:118. P 4:122 as sp.

**S. GIBBONSII** P 2:20, mouth of Columbia.

**S. GRACILIPES** G. Peru.

**S. GRACILIPES** R & G, Am J sc, sr 3, 1:156. P 3:90 as Erechites polypodioides. Mex.

**S. GREENEI** G 10:75. B 1:412. Napa Co, Cal.

**S. HOLMII** P 4:120. Colo, Wyo.

**S. HOWELLII** Greene, T cl b 8:98. P 4:111 as Purshiana. = canus fide IK.

**S. HYDROPHILUS** Nutt, T & G Fl 2: 440. B 1:414.

Variety **PACIFICUS** P 1:220, SF. M 3: 78.

**SENECIO ILICETORUM** Davidson.

A 1:65 fdr, Ab 439.

**S. IMBRICATUS** P 4:117. Alk.

**S. INTEGERRIMUS** Nutt, Gen 2:165. B 1:413.

**S. INVENUSTUS** P 4:124. Colo.

**S. IONOPHYLLUS** P 2:20. Kern Co, Cal.

**S. LACTUCINUS** Greene, Er 1:223, Wyo. P 4:121 (Colo = pagosanus).

**S. LAETIFLORUS** P 3:88.

**S. LARAMIENSIS** A Nels, Torr cl b 26: 483. P 4:111 as Purshianus.

**S. LEMBERTI** P 3:89.

**SENECIO LEMMONI** A. Gray.

Quintin (Or 1334); Arizona (Lemmon).

**S. LONGILOBUS** Bth 18. Mex. B 1:411 as Douglasii.

**S. LUGENS** Richardson, App Frankl 19, 20. Hook Fl 1:332 t 114. B 1:413. P 3: 169.

Variety **EXALTATUS** B 1:413. Ore; Cal. (Eaton, bot king = var. foliosus.)

Variety **FOLIOSUS** G, B 1:413. Colo. Ut.

**SENECIO LYONI** A. Gray.

Z 1:114 Cat.

San Clemente Island (Nevin & Lyon).

Quintin (Palmer).

**S. MACCOUNTHI** P 3:169. Vancouver Isl.

**S. MAJUS** M 1:118 (eurycephalus var. major G. Pac Ry R 4:111).

**S. MENDOCINENSIS** G 7:362. B 1:413.

**S. MICRONDOTUS** Heller (vide anacletus).

**S. MILLEFLOEUS** P 4:116. Colo.

**SENECIO MOHAVEENSIS** A. Gray.

Mohave (Lemmon). Sonora (Pringle).

**S. MUELENBERGII** Sch Bib, Fl 27:499.

P 3:182 as Mesadenia reniformis Raf.

**S. MULTILOBATUS** T & G, Pl Fendl 109. B 1:411 as aureus var: M.

**S. MUTABILIS** P 4:113. Colo.

**SENECIO NEO-MEXICANUS** A. Gray.

N. M.; Arizona; Sber mts (Parish).

**S. NEWCOMBEI** P 3:249.

**S. NUTTALLII** Sch Bib Fl 27: 499. P 3:

183 as Mesadenia plantaginea Raf.

**S. OCCIDENTALIS** P 4:122 (Fremontii

var. occidentalis B 1:118).

**S. OVINUS** P 4:110. Alberta.

**S. PAGOSANUS** M 1:7 (lactucinus P 4:

121 (not Er 1:223).

**S. PALMERI** G 11:80. P 4:111, Guad.

**SENECIO PARRYI** A. Gray.

Sber mts; Arizona; Mexico.

**SENECIO PENINSULARIS** Vasey-Rose.

Quintin, (Palmer 659).

**S. PETRAEUS** Klatt, Abh Nat 15:330. P

3:171.4; 110, 116.

**S. PETROCALLIS** P 4:116, based on

petraeus Klatt. Rocky mts.

**S. PETROPHILUS** P 3:171; 4:116 as

petrocallis.

**S. POLYPODIODES** P 3:90 based on

gracilipes R & G not G (= Erechites,

fide P 3:90).

**S. PORTERI** P 3:186 (renifolia Porter,

Fl Colo 83. not Sch Bib, Fl 28:50).

**S. PUDICUS** P 4:118 (cernuus G, not L).

Rocky mts.

**S. PURSHIANA** Nutt, Am phil sc tr 7:

412. P 4:111. Wyo, Colo.

**S. REGIOMONTANUS** DC 6:429. B 1:

411 as probably Douglasii.

**S. RENIFOLIUS** Sch Bip, Fl 28:50

(1845), Caucasus. Porter Fl Colo 83

(1874) = Porteri P 3:186.

**S. RIDDELLII** T & G Fl 2:444. B 1:411

as Douglasii.

**S. RUBRICAULIS** P 3:89.

**S. RUSBYI** Greene, Torr Cl b 9:64 NM.

P 4:118. M 4:80.

**S. SCALARIS** P 4:108. Chih.

**S. SCOPULINUS** P 4:117 (Bigelovli var.

Hallii G. Phil ac pr 1863: 67). Colo.

**S. SCORZONELLA** P 3:90.

**S. SERIDOPHYLLUS** P 4:121. Nev. Ut.

**S. TERRA** Hook.

Variety **INTEGRISUSCULUS** G, Syn Fl

1 (2): 382 (1884). M 3:62 Sber mts.

**S. SOLDANELLA** G, Phil ac pr 1863:

67. P 4:119

**S. SPARTIOIDES** T & G Fl 2:438. B 1:

411 as Douglasii.

**S. SPATULIFOLIA** K 1:56. Cur 1:140 as

Layneae Greene.

**S. SPHAEROCEPHALUS** P 3:106, 169.

Nev.

**SENECIO SYLVATICUS** Linn.

L, sp pl 868. B 1:410. Eu.

**S. TARAXACOIDES** P 4:119, 120 (am-

plexens var. t, G, Phil ac pr 1863: 67, in

part). Colo.

**S. TOUMEYI** P 3:349. Ar.

**S. TRIANGULARIS** Hook Fl 2:332 t

115. B 1:414.

**S. TRIGONOPHYLLUS** P 3:107. Cal.

**S. VALERIANELLA** P 4:109. Id.

**SENECIO VULGARIS** Linn.

Ann. puberulent or glabrate; sts

slightly fleshy, 1-3 dm hi, more or less

branched; lvs clasping at base, pinnatifid, lobes and sinuses sharply toothed; hds 7-9 mm hl; bracts bk-tipped; rays 0; ak slightly caescent.

Br 1:203, Cruz. B 1:410. Da 10, Er 1:60 LA Co. Eu. Ab 439.

**S. WALTERI** Sch Bip, Fl 27:499. P 3: 182 as *Mesadenia ovata* Raf.

**S. WARDII** P 4:116. Ut.

**S. WERNERIAEFOLIUS** G 19:54.

P 4:111 sub *Purshianus*.

**S. WHIPPLEANUS** G 19:54. M 1:118 as major.

#### Genus *SEQUOIA* Endl.

Endl, Syn Conf 197 (1847).

**SEQUOIA GIGANTEA** Decaisne.

Bot sc France b 1:71. B 2:117.

Giant Sequoia. Estimated to have attained a life period of four or five thousand years. 300-400' high, 30-40" in diam.

**SEQUOIA SEMPERVIRENS** Endl.

Syn Conf 198. B 2:116.

Redwood. A famous tree, growing near the coast only from Monterey bay to the Oregon boundary.

**S. WELLINGTONIANA** Seem, in Bonpl

3:27. B 2:117 as *gigantea*.

#### Genus *SERICOCARPUS* Nees.

Gen et sp Aster 148 (1833).

**S. OREGONENSIS** Nutt, Am Phil sc tr, ns, 7:302. B 1:320 as *rigidus* ("the state with rays conspicuous").

**S. RIGIDUS** Lindl, DC 5:261. B 1:320.

**S. TOMENTELLUS** P 1:283. 2:16 as *Aster brickelliioides*. P 3:55 as *Eucephalus* t.

Type locality: near Waldo, Ore.

**SERICOGAPHIS** Nees, in Mart Fl Bras 9:107 (1847).

**S. CALIFORNICA** G, bot Mex bound 125. B 1:589 as *Beloporne Californica*.

**SELENIPERIUM** Reichb f, Bonpandia 2:116 (1854).

**S. CAUDATUM** Reichb, lc, 2:116.

Variety **WARSCEWICZII** Z 1:128.

**SERAPALCUS** Parl, Rar Pl Sic 2:14 (1840); Pl Nov 75 (1842). = *Bromus* fide IK.

**S. MOLLIS** Parl, Fl Ital 1:395. A 1:44 as B: *hordeaceus* L.

**SERATULA** Dill ex L, Syst ed 1 (1735).

**S. NOVEBORACENSIS** L, sp pl 818. Er 1:3. = *Vernonia* n fide IK.

**S. FILOSA** Ait Hort Kew ed 1, 3:138. M 1:6 s. = *Liatris spicata*.

**SESELI** L, Gen, ed 1, 80 (1737).

**S. LEOCARPUM** Hook, Fl 1:262 t 93. B 1:268 as *Peucedanum* l.

**S. TERNATUM** Pursh, Hook Fl 1: 204 t 94. B 1:268 as *Peucedanum* t.

#### Genus *SESEVIUM* Linnaeus.

Sts prostrate or decumbent, fleshy with opp exstipulate lvs; fls solitary in the axils, sessile or on sh stout pedicels; cox-tube turbinate, free from the ova, lobes 5, oft p within, oblg, obtuse; pet 0: sta 5-many; fil united at base into sets; ova 3-5-celled, with as many sty; cap membranous, ovate-oblg, circumscissile at the middle; sds many, minute, smooth. Sea purslane.

**SESEVIUM PORTULACASTRUM** Linn. Rohrbach in Mart Fl Bras 14 (2): 310 t 70. B 1:251. Da 7.

Of wide distribution in So Cal.

**S. SESSILE** Pers, syn 2:39. A 1:168d. Ab 139. = *portulacastrum* fide IK.

**SETARIA** Beauv, Fl Owar 2:80 (1807).

**S. CALIFORNICA** K 1:27. Cur 1:150, "probably not indigenous." B 2:261.

**S. CAUDATA** R & S, syst 2:495. B 2: 261. (Da 31 = *Chaetochloa imberbis* fide A 2:416.) = *setosa* fide IK.

**S. GLAUCA** Beauv Agrost 51 (1812). B 2:260. Da 18. A 2:416 as *Chaetochloa glauca*.

**S. ITALICA** Beauv, Agrost 51. B 2:260.

**S. IMBERBIS** R & S, Syst 2:89. A 2: 416 as *Chaetochloa* l.

**S. VIRIDIS** Beauv, Agrost 51. B 2:261.

**SEUBERTIA** Kunth, Enum 4:475 (1843). = *Brodiaea* fide IK.

**S. CROCEA** Wood, Phila ac pr 1868, 172. B 2:155 as *Brodiaea* c.

**S. LAXA** Kunth, En 4:475. B 2:155 as *Brodiaea* l.

**SHEPHERDIA** Nutt, Gen 2:240 (1818).

**S. ARGENTEA** Nutt, Gen 2:240. B 2:62. Parry, Fl Wyo 9. Br, Colo 227, 229.

Eastwood, Er 4:32, SBar to Kern Co, Cal.

**S. CANADENSIS** Nutt, Gen 2:241. B 2: 63, Ore, NM.

**S. ELAEAGNOIDES** Nutt, Phila ac pr 7:50. B 2:62 as *argentea*.

**S. ROTUNDIFOLIA** Parry, Am Nat 9: 350. B 2:63, Ut.

**SHORTIA** T & G, Am J sc 1, 42:48 (1842); sr 2, 45:402 (1868).

**S. CALIFORNICA** Nutt in garden catalogs = *Actinolepis coronaria* G, fide B 1:378.

#### Genus *SIBARA* Greene.

P 3:11.

"Slender, erect, sparingly branching glaucous annuals, with leaves usually pinnately divided into very narrow divaricate or retrorse segments. Fls white or purplish, small, loosely racemose. Sepals oblong, equal at base, or nearly so. Petals unguiculate, the ample limb spreading. Filaments flattened; anthers linear-sagittate. Pods slender, little compressed, either distinctly beaked or the stigma subsessile. Seeds oval, not winged or margined."

—Greene, pitt 3:10 (1 My 1896).

**S. ANGELORUM** P 3:11.

**S. BEANDEGEANUM** P 3:11.

**SIBARA FILIFOLIA** Greene.

P 3:11. A 1:6 fdr.

**S. LAXA** P 3:11.

**S. PALMERI** P 3:12.

**S. PECTINATA** P 3:11.

**SIBBALDIA** L, sp pl ed 1, 284 (1753). = *Potentilla* fide IK.

**S. PROCUMBENS** L, sp pl 284. B 1: 180. = P: *Sibbaldi* fide IK.

#### Genus *SIDA* Linnaeus.

Ours low y'ish scurfy-tomentose per herbs; pedicels articulated; inv of 1-3 slender decid bractlets; fls cream-color; carpels 1-seeded, indehiscent or 2-valved; sds pendulous.

**SIDA HEDERACEA** A. Gray.



Sts from deep-seated tap-roots, decumbent, more or less branching,  $\frac{1}{2}$ -1' lg; lvs round-reniform or ovate, dentate or serrate,  $\frac{3}{4}$ -2' broad, on petioles  $\frac{1}{2}$ -1' lg; fls pedicelate, axyl, solitary or in sm clusters; ex-lobes acuminate; pet  $\frac{1}{2}$ ' lg; carpels 6-10, triangular, attached by a straight edge to the slender axis. Abundant in subsaline soils thruout the Sacramento valley. SD; San Gregorio, Baja. CD.

Type locality: "In the interior districts of the Columbia," probably in Ore.

*Malva hederacea* Douglas, MS, in Hooker, Fl 1:107 (1830).

*S. CALIFORNICA* Nutt in T & G Fl 1: 235. B 1:84 as *Sidalcea humilis*.

*S. CRISPA* L, sp pl 685. T & G Fl 1: 235. B 1:87 as *Abutilon crispum*.

*S. ELLIOTTII* T & G Fl 1:231. Z 1:271.

*S. DELPHINIFOLIA* Nutt in T & G Fl 1:233. B 1:84 as *Sidalcea humilis*.

*S. DIFFUSA* HBK, Nov Gen et sp 5:257. Baja: Comondu (Br).

*S. HEDERACEA* Tin G, Pl Fendl 23. B 1:86. Da 3. Ab 249.

*S. MALVAEFLORA* DC; Lindl bot reg t 1036. B 1:83 as *Sidalcea m.*

*S. OBLIQUA* Nutt. T & G Fl 1:233. B 1:87 as *hederacea*.

*S. TRAGIAEOLIA* G, Bost J Nat hist 6:164. Comondu, Baja (Br).

*S. XANTII* G. Z 1:271. Baja: Cape San Lucas; Purilssima (Br).

#### Genus *SIDALCEA* A. Gray.

Erect ann or per herbs with mostly palmately or pedately parted or deeply cleft lvs, sm stipules, and p or pink or sometimes w rather showy fls in terminal racemes or spk, not rarely polygamous by abortion of anth: inv rarely 0; cx 5-cleft: pet 5, com emarginate or truncate; staminal column com distinctly double, the outer sr of 5 distinct 4-10 anth-bearing phalanges, the inner or terminal sr of about 10 mostly 2-ant-bearing phalanges: carpels 5-9, reniform, indehiscent, 1-seeded.

*S. ASPLENIFOLIA* P 3:158.  
*S. ASPRELLA* Greene, Cal ac b 1:78 (7 Mr 1885).

"Deep g; roughish thruout with a sh stellate pubescence: sts several, simple, decumbent, leafy up to slender raceme: lvs 2-3" wide, truncate at base, or with a broad sinus, lightly 5-lobed, the broad lobes each with about 5 rounded teeth: divisions of cx triangular-lanceolate, acute: cor p, 1" lg, lvs lobes truncate, erose: carpels large, transversely rugose, depressed. On bushy hillsides of the lower Sierras, just below the habitat of *Chamaebatia*; apparently not collected before last season; found by Mrs. Curran in El Dorado Co. and by the writer on Mr. John Ramm's ranch, near Comptonville, in Yuba Co. Peculiar, at least among the per sp, in having its lvs all of precisely the same shape, the lowest and the uppermost differing only in point of size. The rough pubescence is likewise very characteristic."

*S. CAMPESTRIS* Greene, Cal ac b 1:76 (7 Mr 1885):

"Bristly hairs of st abundant, forked from the very base and deflexed: lvs

soft beneath with a stellate pubescence, which becomes dense on pedicels and cx: sts slightly decumbent at the very base, otherwise strict, 2-3' hl, simple: lower lvs orbicular, about 9-lobed, the lobes cuneate-obovate, 3-cleft at apex; middle and upper 7-9-parted, their seg with 3-5 linear, somewhat spreading lobes: racemes sh: pet emarginate, 1' lg, deep lilac-p: cx-lobes ovate, lg acuminate: carpels not seen."

Type locality: "Ore," dry prairies (T. J. Howell).

*S. CANDIDA* G. Ckl w 5:10. Colo.

*S. HICKMANI* P 1:139, Monterey Co, Cal. Parish 3786.

*SIDALCEA DELPHINIFOLIA* Ge.

G, Pl Fendl 19. Da 3. B 1:84 as *humilis*. Ab 248 as *malvaeiflora*.

Variety *HUMILIS* Greene.

Davidson, Pl LA Co 3.

*S. DIPLOSCYPHA* G, Pl Fendl 19.—B 1:84.

Greene, Cal ac b 1:79.—"Pubescent with lg, spreading hairs: 1 or 2° hl: lvs deeply 5-9-cleft, with sharply lobed seg: fls in umbellate clusters, their pedicels subtended by 5-7-parted, linear, hispid bracts: cx-lobes lg-acuminate: pet 1' lg, emarginate: fl of outer sta united into broad, membranaceous lobes, which com enclose the inner anth: carpels glab, transversely rugose, the back with a central, longitudinal channel." Lake Co, Cal.

Variety *MINOR* Gray.

Greene, Cal ac b 1:80.—"Differs remarkably from type in having racemose infl, and pet marked by a dark p spot at base."

*S. GLAUDESCENS* Greene, Cal ac b 1: 77 (7 Mr 1885):

"Minutely stellate-pubescent, and somewhat glau thruout: sts num, decumbent, 2° hl, rather slender: lvs, even the lowest, palmately 5-7-parted, cuneate divisions 3-5-lobed or toothed, or those of uppermost entire; raceme simple, loose-Ar. mts of NM, Colo, Mex, So Cal ly fld: divisions of ex attenuate-acuminate most only truncate: reticulations distinct and elongated lengthwise of carpels."

Type locality: "Sierra Nevada, at about 6,000° alt, and ranging from Mt. Shasta to Kern Co. Very common about Summit station, in the neighborhood of Donner Lake."

*S. HARTWEGI* G, Pl Fendl 20.—B 1:84.

Greene, Cal ac b 1:78: "Glab, except the pedicels and cx, which are hispidly pubescent: st 1-3° hl, mostly simple, lvs orbicular, lowest deeply cleft, upper digitately 5-9-parted: seg linear, entire, acute: spk com sh and dense: cx-lobes acuminate: carpels strongly reticulate, hispid above. Common in the Sacramento valley." Cal.

*S. HIRSUTA* G, Pl Wright 1:16. B 1:84 as *Hartwegi*.

*S. HUMILIS* G, Pl Fendl 20. B 1:84

Greene, Cal ac b 1:75.—"Hispid-hirsute especially on pedicels and cx: sts stout, ascending, simple, about 1° hl: radical lvs round, with open sinus; cauline 5-7-parted, their seg obtuse, 3-lobed at apex: raceme lg and loose: pet ob-

cordate, fully 1' lg, rose-p: pedicels stout: cx large, enclosing about 7 large, much depressed, distinctly reticulated carpels." Cal.

Ab 248 as malvaeflora.

**S. HYDROPHILA** M 1:107.

**SIDALCEA INTERRUPTA** Greene.

"Size of *S. ranunculacea*, much more slender, apparently also rhizomatous, st and petioles loosely pilose with firm spreading hairs; herbage deep-g, but cut of the lvs much as in *S. ranunculacea*; fls much sm'er, in elongated and oft interrupted spikes, or even with solitary fls scattered up and down below the terminal spicate cluster: pedicels and ex-tube stellate-pubescent only, but teeth of the latter pilose: fr much depressed, the nutlets nearly or quite glab, obviously the not strongly reticulate."—Gifts 1:75. Hackett's Meadows, Cal., 8600'.

**S. MALACHROIDES** G 7:322. B 1:84.

Greene, Cal ac b 1:80.—"Stout, hirsute, 3-6" hi: lvs cordate, 2-5" broad, 3-7 angled with lobes sharply toothed: bractlets subulate, caducous; fls sm, w, nearly sessile in close racemose or spicate clusters: cx-lobes triangular, acute: pet narly orbiculate: carpels glab, not reticulate, the back showing a more or less distinct central ridge. Rather rare, along the coast from Mendocino Co to Santa Cruz, Cal."

**SIDALCEA MALVAEFLORA** A. Gray.

Pl Wright 1:16. Par 204 t. P 1:86 Mig Ab 247. Ckl w 5:10. Ha 95. Br 1:202 Cruz, 208 Rosa. B 1:83. 2:437.

Vide d sub hubilis.

**SIDALCEA NEOMEXICANA** A. Gray. (Parish 1747).

**SIDALCEA NITROPHYLLA** Parish.

A 1:28 fdr.

**S. OREGANA** G. Pl Fendl 20. Br 1:13.

Greene, Cal, ac b 1:77.—"Sparingly hirsute below, infl stellate-tomentose, other parts of plant glab: sts 1-5" hi, paniculately branched above: foliage as in *S. campestris*, but the seg nar'er ex globose in fr, its seg ovate to lanceolate, acute: cor  $\frac{1}{2}$ " or more lg: carpels very sm for the genus, smooth and glab, not in the least depressed. Very com in Ore and northern parts of Cal. The largest sp, distinguished by its paniculately branching habit, and sm cx and carpels, the latter very straight, not depressed as in the other sp."

B 1:84 as form of malvaeflora.

**SIDALCEA PARVIFLORA** Greene.

Ab 248. A 1:23 fdr.

**SIDALCEA PEDATA** A. Gray.

Low scapes ascending, pedately 5-7 parted lvs rising from a tuberous-thickened rt; pet rose- p, 8-10 mm lg; carpels smooth, glab. Bear. G 22:288.

**SIDALCEA RANUNCALACEA** Greene.

"Sts 1-2" hi, mostly solitary, terminating a slender superficially seated horizontal rt-stock, retrorsely hirsute from the decumbent base to near the middle; herbage of a very light g, the lg petioles and upper part of st sparsely hirsute-hairy: lvs orbicular, the lowest 7-cleft and the seg with 2 or 3 obtuse lobes, the cauline more deeply cleft and their seg acutely 3-5-lobed, those near the spike 5-parted, the seg lance-linear, entire:

spikes very sh and dense, and fls rather large: cx and pedicels densely villous-hirsute: fr?"—Gifts 1:75. Hackett's Meadows, Cal., 8600'.

**S. REPTANS** P 3:159.

**S. SCABRA** P 3:158.

**S. SPICATA** Greene, Cal ac b 1:76 (7 Mr 1885):

"Equably hispid-hirsute throat, the hairs simple and not deflexed, stellate pubescence sparse, mostly confined to under surface: sts 2" hi, strict and simple, or with a few branches above: lowest lvs orbicular, sinus nar or closed, lobes and teeth shallow and well rounded; cauline parted into 7, variously incised, or oft linear, entire seg: raceme sh, spicate-crowded: pet deeply notched, about  $\frac{1}{2}$ " lg, pinkish: pedicels very sh: cx thin, very hairy, its lobes ovate, acute or acuminate: carpels sm, depressed, pubescent but not reticulate."

Type locality: "Cisno, Sierra Nevada, Cal, 1870. Dr. Kellogg." "Also from near Donner Lake, 1883, Mrs. Curran."

**S. SULCATA** Cur in herb.

Greene, Cal ac b 1:79 (7 Mr 1885).

"Glab below, sparsely hirsute above, especially on cx and pedicels; about 2" hi, sparingly branching: foliage as in *S. tenella*: cx-lobes ovate-lanceolate, abruptly acuminate: cor sm, light p: carpels evenly reticulate on sides, back striately so, or else (by disappearance of reticulation), longitudinally about 7-sulcate."

Type locality: "near Folsom in May, and on Sweetwater creek, El Dorado Co, Cal, in Je, 1884, by Mrs. Curran."

**S. TENELLA**, Greene, Cal ac b 1:7.—1:79: "Rough-puberulent, or nearly glab, glaucescent; slender and branching, about 1" hi: lvs sm, lowest orbicular, 5-7-lobed, upper digitately parted; seg linear, entire: p fls in num sh racemes: cx-lobes lanceolate, acuminate: carpels not hairy, rugose- or alveolate-roughened. Com in foothills skirting Sacramento valley, Cal, first collected by Ellisha Brooks."

**S. VALIDA** P 3:157.

**S. VITIFOLIA** G 7:332. B 1:84 as "a les hispid form" of malachroides.

**SIDEROXYLON** [Dill] "syst ed 1 1735).

**S. LEUCOPHYLLUM** Wat. Baja.

**SIEVERSIA** Willdenow, Berl mag 5:397 (1811). P 4:48.

**S. ANEMONOIDES** Willd, Berl mag 5:

397 (1811). P 4:49 as pentapetala.

**S. CILIATA** G Don, Gen Hist 2:528

(1832). P 4:50. Mo, Ar, Canada.

**S. GLACIALIS** R. Br, Parry's 1st Voyage, App 276. P 4:48. Asia.

**S. PENTAPETALA** P 4:48, based on

Dryas pentapetala L. Asia.

**S. ROSSII** R Br, Parry's 1st voyage, app

276. P 4:48. Subarctic.

**S. ROTUNDIFOLIA** Ch & Schl in Linnaea 2:4 (1827). P 4:50. Alk.

**S. SERICEA** P 4:50, based on Geum sericeum P 3:172. Nev, Mont.

**S. TRIFLORA** R Br; Hook bot mag t 2858. B 1:176 as Geum triflorum. P 4:50

as ciliata (as regards G Don's).

**S. TURBINATA** P 4:50, based on Geum turbinatum, Rydb, T cl b 24:91 (1897).



Ar. NM.

**S. PARADOXA** Don. B 1:176 as *Fallugia* p.

**Genus SILENA Linnaeus.**

L, syst ed 1 (1735). A 1:264d.

**S. ANGLICA** L, sp pl 416. Ab 144. A 1:21d (sub *Gallica*).

**SILENA ANTIERRHINA** Linn.

L, sp pl 1:419. A 1:21d. Ab 144. P 1:86 Mig. Greene, Cal ac b 2:391 Cruz. Parish Z 1:9. Guad. Br, Z 1:113 Cat; Colo 233. Da 3. B 1:63.

**SILENA AFERTA** Greene.

"Per, slender, erect, 2' hi or less, with but a single pair of cauline lvs near the middle, these narly linear and about 3' lg, the innermost basal ones similar to these, but the outer sh, oblanceolate, acute; both st and foliage retrorsely puberulent: cx cleft below the middle, and least in anthesis expanding to open-campanulate, only the seg herbaceous and even these with scarious margin, the broad and nearly saucer-shaped tubular part scarious, but with several g nerves: cor g'ish, twice as lg as cx and salverform, pet as to their expanded portion cuneate-obcordate: fr?"—Gifts 1:75. Hackett's Meadows, Cal. 8600°.

**S. BOLANDERII** G 7:330. B 1:64 as Hookeri.

**S. BRIDGESII** Rohrbach, Ind Sem Berol 1867, et Monog *Silene* 204. B 1:66. Yosemite.

**SILENA CALIFORNICA** Dur.

Pl Pratt 83. Par 360 t. Jepson, Er 1:12. Cov 70, 254. A 1:22d. B 1:64.

Type locality: "hills of Deer Creek", Cal.

**S. CAMPANULATA** Wat 10:342. B 1:63. 2:433.

**S. CONICA** L, sp pl 418 Eu. Da 3.

**S. CONCOLOR** Gifts 1:153. NM.

**SILENA CONOIDEA** L.

Davidson, *Erythraea* 1:58. Monica.

Brandegee, *Zoe* 1:113 Cat.

L, sp pl 418. A 1:264. Br 1:202 Cruz, "probably from Eu". A 1:74d (sub *multinervia*). 264.

*Silene multinervia* S. Watson.

**S. DORRII** K 3:44, f 12. B 1:63 et Cur 132 as *Menziesii*.

**S. DOUGLASHII** Hook Fl 1:88. B 1:66. Wash. Mont. Nev. Cal. Cuyamaca mts—Palmer (?).

**S. ENGELMANNI** Rohrb, in Ind Sem Hort Berol (1867) app 2:5. B 1:65 as *incompta* G. = *Bridgesii* fide IK.

Variety **BEHRRI** Rohrb, in *Linnaea* 36: 264. B 1:66 as *verecunda*.

**SILENA GALLICA** Linn.

L, sp pl 1:417. Greene, Cal ac b 2:391 Cruz. Br 1:208 Rosa. Da 3. Er 1:57. B 1:63. Parish Z 1:9. A 1:21d. Par 250. P 1:86 Mig. Ab 144 as *anglica*.

**S. GRAYI** Wat 14:291. B 2:434.

**S. HOOKERI** Nutt, T & G Fl 1:193. B 1:64. Par 362. Hook f, bot mag t 6051.

**S. INCOMPTA** G 7:330. B 1:65.

**SILENA LACINIATA** Cav.

lc on 6:44 t 564. Lindley, bot reg 17: t 1444. B 1:64. Da 3. Ab 144. Ha 78. Indian pink. Par 360. Greene, Cal ac b 2:392 Cruz? Br 1:207 Rosa (cites *S. simulans* Greene as a synonym); Cruz, "a few i to

4° hi". A 1:22d. M 4:79.

Variety **CALIFORNICA** G, Wat 10:341. B 1:64 as sp.

**S. LEMMONI** Wat 10:342. B 1:64.

**S. LONGISTYLIS**. A 1:22.

**S. LYALLII** Wat 10:342. B 1:63.

**SILENA MULTINERVIA** S. Watson. A 1:74 fdr, 265, as *conoidea* f *Baja*! Z 1: 133. Ab 144.

*S. conoidea* Davidson, *Erythraea* 1:58, not L.

See *Silene conoidea* L.

**S. MENZIESII** Hook, Fl 1:90 t 30. B 1:63.

**S. MONANTHA** Wat 10:340. B 1:63. = *Douglasii* fide IK.

**S. MONTANA** Wat 10:343. B 1:65.

**S. MULTICAULIS** Nutt, T & G Fl 1: 192. B 1:66 as *Douglasii*.

**S. OCCIDENTALIS** Wat 10:343. B 1:64.

**S. OREGANA** Wat 10:343. B 1:65.

**SILENA PALMERI** S. Watson.

Wat 11:124. B 1:65. McClatchie, Er 2:79 Mt Lowe. SD Co! Sber mts (Parish 930). A 1:22d.

**SILENA PARISHII** S. Watson.

Wat 17:366. Ha 78. Robinson, Syn Fl 1: pt 1, 218. A 1:23d.

**S. PECTINATA** Wat 10:344. B 1:65.

**SILENA PLATYOTA** S. Watson.

Wat 17:366. Da 3. A 1:22d.

**S. QUINQUEVULNERA** L, sp pl 1:416. Greene, Cal ac b 2:391 Cruz? Br. Z 1: 113 as probably *conoidea* L (as regards Greene's plant).

**S. SARGENTII** Wat 14:290. B 2:434.

**S. SCOULERI** Hook, Fl 1:88. B 1:66.

**SILENA SIMULANS** Greene.

P 1:63, Cruz; 86 Mig. A 1:21 fdr. Z 1:133 as *laciniata*.

**S. SPALDINGII** Wat 10:344. B 1:66.

**SILENA VERECUNDA** S. Watson.

Wat 10:344. B 1:652. 2:433. Ab 145. A 1:265d.

Hall, U 78.

Abrams, Fl LA 145.—Gabriel: Sber mts.

**SILPHIUM** L, Coroll Gen 16 (1737).

**S. COLLINUM** P 4:44. Tenn. Ga.

**S. COMPOSITUM** P 4:44.

**S. HELIANTHOIDES** P 4:44. Tenn.

**S. INCISUM** P 4:45. Ga. . . . .

**S. SIMPSONII** P 4:44. Fla.

**S. TRIFOLIATUM** P 4:43.

Variety **LATIFOLIUM** G. P 4:44.

**S. LAEVIGATUM** Elliott, sketch 2:465. P 4:44. = *trifoliatum* fide IK.

Genus **SILYBUM Gaertn.**

**SILYBUM** Vaill ex Adans, Fam 2:116

(1763).

**S. MARIANUM** Gaertn, Fruct et Sem Pl

2:378. Greene, Cal ac b 2:404, Cruz,

"forming thickets impenetrable at the growing season of the year." Da 10. Z

1:58. B 1:421.

Genus **SIMMONDSIA Nuttall.**

**SIMMONDSIA CALIFORNICA** Nutt.

Lond J bot 3:400. P 1:208 Cedros. B 2:67. A 1:88d. CD! Baja!

**S. PABULOSA** K 2:21; Hesperian N 1860 with f. Cur 1:146 et B 2:67 as *Californica*.

**SIMSIA** Pers, Syn 2:478 (1807). = *Encelia* fide IK.

**S. CANESCENS** G, Pl Fendl 85. B 1:351

as *E. eriocephala* G.

*S. FRUTESCENS* G. Mex bound 89. B 1: 352 as *E. f.*

*SINAPIS* L. syst ed 1 (1735). = *Brassica* fide IK.

*S. ARVENSI* L. sp pl 668. B 1:40 as *B. Sinapistrum*. A 1:119s.

*S. NIGRA* L. sp pl 668. A 1:118s. = *B. sinapoides* fide IK.

*SISYMBRIUM* L. syst ed 1 (1735). A 1:123d.

*S. ACUTANGULUM* B & W. B 1:41. Da 2. A 1:115 as *Thelypodium lasiophyllum* variety *inalienum*; 124 as same.

*S. BRACHYCARPUM* Fournier = form of *canescens* probably as regards plant from SD (fide B 1:40). Of Bot Beechey (not Richardson) = *incisum* var. *Hartwegianum* fide B 1:41.

*S. BRANDEGEANUM* Rose, CNH 1:10. P 3:11 as *Sibara* B. Baja.

*S. CALIFORNICUM* Wat. bot King 23. G. Am J sci ser 3, 3:150 as *incisum*. B 1:41 as same.

*S. CANESCENS* Nutt. Gen 2:68. B 1:40. Da 2. Br. Z 1:113 Cat. A 1:124 as *pinnatum* (fide Greene, Cal ac b 2:390).

"The Santa Rosa Indians mix the seed of this plant with their corn meal to give it a more agreeable flavor."—Ha 82. Tansy Mustard.

*S. DEFLEXUM* Harv; T. Pacific Ry R 4:66. B 1:41 as *reflexum*.

*S. DIFFUSUM* G. Pl Wright 1:8. Tex. Cov 63.

*S. HARTWEGIANUM* Fourn. Sisymb 66. B 1:41 as *incisum* variety H. A 1:124s. P 3:95 as *Sophia* H.

*S. INCISUM* E. ex G. Am ac mem. ns. 4:8. Da 2. B 1:41. P 3:95 as *Sophia* i A 1:124d.

Variety *HARTWEGIANUM* Wat. B 1:41. A 1:124d. = H.

Variety *FLIPES* G. Pl Fendl 8. B 1:41. —"a form with divaricate pedicels 6-8" lg. exceeding the pods." Ore. Ar. A 1:124d.

Variety *SONNEI* Rob. Syn Fl 1:140. P 3:95 as *Sophia* Sonnel.

*S. JUNCUNEUM* Bleb. T & G Fl 1:91. B 1:41. Parry, Pl Wyo 4. Sib. Ore. Mont. Nev.

*S. LINIFOLIUM* Nutt. T & G Fl 1:91. B 1:41 as *juncuneum*. P 3:127 as *Schoenocrambe linifolia*.

*S. LONGEPEDICELLATUM* Fourn. Sisymb 59 (excl syn = *incisum* variety *filipes* fide B 1:41). A 1:124s.

*S. OFFICINALE* Scop. Carn ed 2. n 824. Greene, Cal ac b 2:390. Cruz. "in cult lands only". Da 2. B 1:41. A 1:124d. Ab 169 as *Erysimum* of.

*S. PINNATUM* Greene, Cal ac b 2:390. Cruz. P 1:200 Cedros. A 1:124. Based on *Erysimum* p. of Walter, Fl Carol 174 (1788); et *Sisymbrium canescens* Nutt. Gen 2:68 (1818).

*S. PYGMAEUM* Nutt. T & G Fl 1:91. B 1:41 as *juncuneum*. P 3:128 as *Schoenocrambe pygmaea*.

*S. REFLEXUM* Nutt. Phil ac J. ns. 1: 183. B 1:41. Br 1:207 Rosa. (K 2:101 f 29 = *Arabis Holbaellii* fide Cur 1:130 et A 1:112). A 1:115, 124 et Ab 166 as *Thelypodium lasiophyllum*.

Genus *'SISYRINCHIUM* Linnaeus.

Per glab herbs, with sh rtstocks, simple or branched 2-edged or 2-winged sts. linear grass-like lvs and rather sm. mostly bl. terminal fls. umbellate from a pair of erect g bracts: Perianth-tube sh or 0, the seg oblg or obovate, equal, mostly aristulate: sta monadelphous, their anth alt with branches of sty; stig filiform. Blue-eyed grass.

*S. ANCEPS* Lam. Enc 1:403 (1783). P 2:70 near Tehachapi, Cal. etc. B 2:141.

*S. ARIZONICUM* Rothrock. Ar. B 2:141.

*SISYRINCHIUM BELLUM* S. Watson. Wat 12:277. Par 290 t. B 2:140. P 4:36.

Ab 93. Da 17. Br 1:217 Rosa. Greene, Cal ac b 2:413 Cruz. Ha 69. Baja to Ore. M 3:69.

Sts 2-4 dm hi, glab or with scabrous margins, with 1-3 floriferous nodes at summit; peduncles com 2 at each node; spathes of 2, nearly equal bracts, scabrous on keel, 4-7-fld; perianth of a delicate shade of mauve, with canary y at base, 2 cm broad or more; sta united to near the summit; anth very sm; cap round-obovoid, 6 mm hi; sds 1.5 mm thick, obscurely pitted.

Fls blue, p-stripped. Baja Cal. to Oregon.

*S. BERMUDIANA* P 4:33.

*SISYRINCHIUM CALIFORNICUM* Ait. Hort Kew ed 2, 4:135. B 2:141, 484. Da 17. Par 290. Parish. Z 5:112, "not SD but Monterey Co."

Scap winged: fls y. Wet spots, coast. Synonymy: *S. lineatum* T. Pac Ry R 4:13, SD (Parry).

*S. CONVOLUTUM* Klatt, Linnaea 34: 735. B 2:141 as *Californicum*.

*S. DEMISSUM* P 2:69. 4:34.

Type locality: Bill Williams mts. Ar.

*S. DOUGLASSII* Dietrich, sp pl 2:504. B 2:141 as *grandiflorum*.

*S. FLAVIDUM* K 2:50 f 3. B 2:141 et Cur 1:148 as *Californicum*.

*S. GRANDIFLOREM* Dougl. Lindl bot reg 16: t 1364. Hook. bot mag t 3509. Don in Sweet, Brit Fl Gard, sr 2, t 388. B 2:141, 484.

*S. HALOPHYLUM* P 4:34. Nev.

*S. LANGLOISII* P 4:32, La. ....

*S. LINEATUM* T. Pac Ry R 4:143. B 2:141 as *Californicum*.

*S. LITTORALE* P 4:33. Alk.

*S. MARITIMUM* M 1:48.

*S. MONTANUM* P 4:33. Colo.

*S. MUCRONATUM* Michx. B 2:141, Nev.

*S. XEROPHYLLUM* P 4:32, Fla.

*SITANION* Raf. A 2:443d. (4 sp d.)

*S. ELYMOIDES* Raf. T Pac Ry R 4:157.

B 2:327 as *Elymus sitanion*.

*SITANION RIGIDUM* J G Smith. Ab.

SCA b 1:87, summit of Mt San Antonio, LA Co.

Genus *SIUM* Linnaeus.

A 1:269d.

*S. ANGUSTIFOLIUM* L. sp pl ed 2, 1672. B 1:260 as *Berula* a; A 1:286 as B: erecta.

*SIUM CICUTAEFOLIUM* Bmel.

Abrams, Fl LA 286. Oak Knoll (McClatchie).

Schrank, Baler Fl 1:558. B 1:261. A 1: 270d.

*SIUM ERECTUM* Huds.

Fl Angl ed 1, 103. Eu. Da 7. A 1:270, 286, as *Berula* e.



**Sium heterophyllum** Greene.

A 1:270d.

Abrams, Pl LA 286, near Pasadena (Davidson).

McClatchie, Erythraea 2:123, Pasadena.

S. LINEARE Michx, Fl 1:167. B 1:261 as cicutae-folium. = Apium 1 fide IK.

SMELOWSKIA C. A. Meyer, in Ledeb Fl Alt 3:165 (1831).

S. CALIFORNICA G 6:520. B 1:41 as Sisymbrium incisum.

S. CALYCINA C. A. Mey. Perry, Pl Wyo 14, 25. B 1:42. Colo. Ore.

S. FREMONTII Wat 11:123. Ore. B 1:42.

SMILACINA Desf, in Ann mus Par 9: 51 t 9 (1807).

S. AMPLEXICAULIS Nutt, Phil ac J 7: 58. B 2:161. Par 24. Ha 69. False Solomon's Seal.

S. RACEMOSA Desf, lc 9:51.

Variety AMPLEXICAULIS Wat, Bot King 345. B 2:161 as sp.

S. SESSILIFOLIA Wat. B 2:161. Par 23. Greene, T cl b 15:87 as Unifolium sessilifolium. SD mts! Canada.

S. STELLATA Wat, bot king 345. B 2: 161 as mainly sessilifolia. P 1:281 as Unifolium liliaceum.

S. UNIFLORA Menz, Hook Fl 2:175 t 190. B 2:180 as Clintonia u.

SMILAX CALIFORNICA A. Gray.

B 2:186.

S. ROTUNDIFOLIA Bth 341. B 2:186 as Calif.

Variety CALIFORNICA a DC, Mon Phan 1:75. B 2:186 as sp.

SOLANOA P 2:65-67 based on Schizonotus G.

S. PURPURASCENS P 2:67 based on Gomphocarpus p G (Schizonotus p G). Er 1:10.

**Genus SOLANUM Tournefort.**

A 1:208d.

S. ARIZONICUM Parish, Cal. ac pr, sr 3, bot 2:165 fd. Ar.

S. CALIFORNICUM Dunal in DC. B 1: 539 as umbelliferum.

SOLANUM DOUGLASII Dunal.

DC 13:48. Par 82. P 1:92 Mig. Greene, Cal ac b 2:408 Cruz. Ab 351. Da 12. B 1:538 as nigrum variety D. Cov 4:167 Panamint mts.

Com somewhat woody, 1-2 m hi; sts angular, angles somewhat denticulate-scarious, otherwise more or less puberulent; lvs variously angular-dentate, or some nearly entire; umbels nearly opp the lvs, several-fld; fls w or pale p, 8-14 mm broad, pubescent without, deeply 5-parted, lobes lanceolate; anther 4-5 mm lg; fl about 1 mm lg, stout, hairy, nearly equaling the slender sty; fr black.

Type locality: "In Nova California."

Variety VILLOSUM Da 12.

SOLANUM ELAEAGNIFOLIUM Cav.

B 1:539. Mex. Tex. Ar. A 1:208.

Parish Erythraea 3:61.—"Well established by roadsides at South Riverside, Cal. (W. J. Lester).

S. GENISTOIDES Dunal in DC 13 (1): 85. B 1:539 as umbelliferum.

S. HETERODOXUM Dunal, Hist Solan 235 t 25. B 1:538 Mex.

S. HINDSIANUM Bth, bot sulph 39. B 1:539 as elaeagnifolium. Baja (Or 1339), a good sp.

S. LINDSEIMERIANUM Scheele in

Linnaea 21:766. B 1:539 as triquetrum.

S. LYCOPERSICUM L, sp pl 185. B 1: 538 as Lycopersicum esculentum.

SOLANUM NIGRUM Linn.

L, sp pl 1:186 (1753). Cov 167. Par 82. B 1:539. Cosmopolitan. Pac Rur Press 38:511. Garden &amp; Forest 3:159. M 3:61 Riverside.

Ann or sometimes becoming woody at base and more enduring, widely branching, g. almost glab; lvs more or less ovate and sinuate-toothed, sometimes merely repand or nearly entire, acute or acuminate; fls in sm and pedunculate lateral umbellate clusters; fr sm, bk when ripe, or rarely reddish. Black nightshade. SBar (Or 213); SD mts! Variety DOUGLASII G, B 1:538 based on sp. of Dunal. Br 1:215 Rosa. Guad, Cruz, Baja! SD!

S. OLIVAEFORME, Smith, bot gaz 7:— Z 1:63. Guat.

SOLANUM PALMERI Vasey &amp; Rose. Quintin.

SOLANUM ROSTRATUM Dunal.

Hist Solan 234. Mex. B 1:538. A 1:208d. Ab 352. La 12. Z 1:124.

S. TENUILOBATUM Parish.

"Sufrutescent, sts slender, angled, glabrescent below, hirsutulous above with sh, 1- to several-celled, non-glanduliferous hairs; lvs linear to narly oblg, 2-3 cm lg, the midrib prominent, all but the uppermost with a pair of hastate linear lobes at base; umbels 1-4-fld; cor 12-15 mm wide; fr not seen."—Parish, Cal ac pr, sr 3, bot 2:165. Baja.

S. TRIQUETRUM Cav, lc 3:30 t 259. B 1:539.

S. TUBEROSUM L. M 4:80.

S. UMBELLIFERUM Esch.

Mem ac Peters, 1821-22:283. B 1:539. Par 274. Da 12. M 3:36.

Shrubby; hairs branched; leaf-base mostly narrow. Los Angeles.

Variety CALIFORNICUM Parish, Cal ac pr, sr 3, bot 2:172 based on S: C (Dunal in DC 13:86) et S: umb (Greene, Man 267 non Esch). SF: SBar; Nev.

Variety TRACHYCLADON T, Pac Ry R 7:12. B 1:538 as nigrum variety Douglasii.

S. VILLOSUM Lam. A 1:209d. Ab 351.

S. WALLACEI Parish. A 1:209d. Ab 351.

S. WALLACEI Parish, Cal ac pr, sr 3, bot 2:166 based on S: xanti Wallacei G (S: xanti Wat 11:117 not G).

Abrams, Fl LA 351. Cat.

Variety VIRIDIS Parish, Cal ac pr, sr 3, bot 2:166.

"Stout, erect, glabrate, or above hispidulous; hairs mostly reduced to a single cell; lvs ovate, cordate, or rounded at base; cup-shaped, with sh lobes."—Parish, lc.

Habitat: Central Cal, near the coast.

S. XANTI G 11:90. B 1:539. 2:471. Da 12. Ab 351. Par 274t. A 1:209d. M 4:59.

Hall U 114.

Parish, Cal ac pr sr 3, bot 2:167.

Gray, Am ac pr 11:90 (1876).

Type locality: not given.

Throughout Cal., south.

Variety GLABRESCENS Parish, Cal ac pr, sr 3, bot 2:169 fd. Ore; Baja; Ar.

Abrams, Fl LA 351.—"Occasional in

the valleys and foothills, mostly in dry and rather exposed places."

Parish, Cal ac pr sr 3, bot 2:167.

Hall U 114.

Variety **GLABRESCENS** Parish. A 1: 209d. Ab 351.

Variety **INTERMEDIUM** Parish, Cal ac pr, sr 3, bot 2:168 fd.

Variety **INTERMEDIUM** Parish. A 1: 209d. Ab 351.

Abrams, Fl LA 351.—"Common in all our low hills and in the mts."

Variety **WALLACEI** G 11:90. Greene, Cal ac b 2:408 Cruz. Br 1:215 Rosa.

Parish as sp. Guad. Cat. B 1:539.

Variety **VILLOSUM** Da (LA).

**SOLEA** Spreng, in Schrad J bot 4:192 (1800). = *Ionidium* fide IK.

**S. CONCOLOR** Gingius P 1:42, cites concolor B & H as a synonym.

#### Genus **SOLIDAGO Linnaeus.**

Strict simple-sted per herbs, with alt more or less serrate lvs, and many sm hds in terminal clusters which are com in scorpioid racemes and forming a panicle: inv nar, its bracts in 2 or more sr, neither herbaceous-tipped nor glutinous: fls all permanently y, outer and ligulate sh'er, inn nar-funneliform: sty-appendages lanceolate: ak terete or prismatic, 5-10-nerved, glab or pubescent: pap a series of unequal scabrous permanently w bristles.

= *Chrysoma* fide Greene, Er 3:6.

**S. AUREOLA** P 4:236.

**S. BELLIDIFOLIA** P 4:100.

**SOLIDAGO CALIFORNICA** Nutt.

Nutt. A 1:196d. Ha 131.

Hall, U 131.

**S. CILIOSA** P 3:22.

**SOLIDAGO CONFINIS** Gray.

A 1:196d.

Monterey to Mexico; CD! Cruz; Rosa. SD Co (Cleveland); SBar (Parish).

**S. CORYMBOSA** Nutt. B 1:318 as *Virga-aurea* var. *multiradiata* T & G.

**S. DECUMBENS** P 3:161.

**S. DIFFUSA** G. B 1:314 as *Bigelovia* d.

**S. ELONGATA** Nutt. B 1:319.

Variety **MICROCEPHALA** K 5:55. Cur 1:139 as "the ordinary form with hds of full size."

**S. FASCICULATA** P 3:101. Oklahoma.

**S. GUIRADONIS** G 6:543. B 1:311.

**S. LAETA** P 5:138.

**S. MISSOURIENSIS** Nutt. Ckl W 6:10. Colo.

**SOLIDAGO OCCIDENTALIS** Nutt.

T & G Fl 2:226 (1842). B 1:318.

Glab throat, 3-4" hi, paniculately branched, slender: lvs linear, entire, obscurely 3-nerved, 2-4" lg, 1-3" wide: hds in num sm clusters ( $\frac{1}{4}$ " lg): inv-scales acute: rays 16-18, not exceeding the 8-14 disk-fls. British Columbia. Baja!

Type locality: "banks of the Oregon and Wahlamet and Lewis River, in the Rocky mts."

Cov 124.—"North Fork of Kern River." Da 8. Par 195.

*Euthamia occidentalis* Nutt, Am Phil soc tr, n sr. 7:326 (1841).

**S. PARRYI** Greene, Er 2:57 based on *Aplonanthus Parryi* G.

**S. PETIOLARIS** Less, H & A. (= *spiciformis* et *Californica* fide B 1:318, 319).

**S. PRUINOSA** P 4:70.

**S. PUBERULA** C & S B 1:319 as *Californica*.

**S. RACEMOSA** P 3:160.

**SOLIDAGO SEMPERVIRENS** Linn.

L, sp pl 878. B 1:319. Da 8.

Completely glab: sts strict, 2-3° hi: lvs fleshy, lanceolate, entire, lower tapering into a lg nar base, upper reduced to subulate bracts of the virgate rather dense panicle: inv-scales lanceolate, obtuse: rays 8-10: ak minutely pubescent. SF. SD Co.

Throughout Am; SBar (Parish).

**SOLIDAGO SPECIOSA** Nutt.

Parish, Ery 6:92, SBar mts.

**S. SPICIFORMIS** T & G Fl 2:202. B 1: 318.

**S. SUBVISCOSA** P 3:348.

**S. TRINERVATA** P 3:100.

**S. VASEYI** M 1:7 based on *arguta* var. *Carolina* G, syn Fl 1 (2): 155.

**S. VENULOSA** P 5:138.

**S. VIRGA-AUREA** Duct. = *Virgaurea* fide IK.

Variety **MULTIRADIATA** T & G. B 1: 318.

#### Genus **SOLIVA Ruiz & Pavon.**

**SOLIVA B & P**, Prod 113 t 24 (1794).

**S. DAUCIFOLIA** Nutt, T & G Fl 2:425. B 1:406. = sessilis.

Ann, diffuse or creeping, about a span hi, soft, hairy: lvs once or twice pinately dissected into rather few linear acute divisions: hds sm (2-3" broad), sessile in the forks: inv scales ovate, acuminate: ak minutely hairy, obovate, with the broad or nar and thin wings entire, each terminating upwards in an incurved tooth or point. SBar to Mendocino Co.

**SOLIVA SESSILIS** R. & P.

Prod 113 t 24. B 1:406 Chili. Z 1:207. See *daucifolia* for d of Cal form.

#### Genus **SONCHUS Linnaeus.**

L, syst ed 1 (1735). A 1:256d.

**SONCHUS ASPER** Vill.

Fuchs, Hist 674 (1542). Br 1:214 Rosa. Greene, Cal ac b 2:406 Cruz. Ab 450. A 1:256d.

Parish, Zoe 1:58.

Brandege, Zoe 1:114 Cat.

**SONCHUS OLERACEUS** Linn.

L, sp pl 794. Br 1:214 Rosa, Greene, Cal ac b 2:406 Cruz. Ab 449. A 1:256d.

Parish, Zoe 1:58.

Hall, U 131.

Davidson, *Erythra* 1:60, LA Co.

McClatchie, *Erythra* 2:125, Cat.

**SONCHUS TENERRIMUS** Linn.

L, sp pl 794. Br, Z 1:114 Cat. Parish. Z 1:57.

**SONNEA** P 1:22.

**S. FOLLACEA** P 1:222 Nev.

**S. GLOMERATA** P 1:22 based on *Plagiobothrys* g G 20:286.

**S. KALKNESSII** P 1:23.

Type locality: "near Mono Lake, in the Sierra Nevada, June, 1886. Dr H. W. Harkness."

**S. HISPIDA** P 1:22 based on *Plagiobothrys* j G 20:286.

**S. JONESII** P 1:23 based on *Plagiobothrys* j G, syn Fl suppl 430.

**S. KINGII** P 1:23, based on *Eritrichium* K Wat, bot king 243 t 23.



- SOPHIA** Adams. A 1:116 d.  
**S. HARTWEGIANA** P 3:95.  
**S. INCISA** P 3:95. Ab 177. A 1:116d.  
**S. OBUSA** Gifts 1:96. NM.  
**S. PINNATA** Howell. Ab 178. A 1:116d, 124.  
**S. SERREATA** Gifts 1:96. NM.  
**S. SONNEI** P 3:95.

Genus **SOPHORA** Linnaeus.

- SOPHORA ARIZONICA** S. Watson.  
 Wat 11:135 (1876). B 1:114.  
**S. SPECIOSA** T. Pac Ry R 4:82 not Bth.  
 B 1:115 as *Arizonica*.  
**SOREUS** L. syst ed 1 (1735).  
**S. CALIFORNICA** Greene, Fl Fr 54. P 4:131.  
**S. DUMOSA** P 4:129. Ar.  
**S. OCCIDENTALIS** Greene, Fl Fr 54. P 4:131, based on *Pyrus occidentalis* Wat 23:263.  
**S. SAMBUCIFOLIA** Roem. syn *Monog* 3:139. B 189 as *Pirus* S.  
**S. SCOPULINA** P 4:130. NM.  
**S. SITCHENSIS** Roem. lc. B 1:189 as *Pirus sambucifolia*.  
**S. SUBVESTITA** P 4:130. Minn.  
 Genus **SPARGANIUM** Linnaeus.

Marsh or aquatic plants with simple or somewhat branched sts; fls in globose hds along the upper portions of the st and branches, the upper hds stam; the lower pist, in the axils of lf-like bracts; perianth of minute irreg scales; sta with long slender distinct fil; ova sessile, mostly 1-celled; fr nut-like.  
**SPARGANIUM EURYCARPUM** E.  
 Da 177 Hanson (Or 1307?) fr not seen Ab 9. B 2:188.

Sts rather stout, 1-2.5 m hi, branching; lvs, linear flat, slightly keeled beneath, the lowest 1-1.5 m lg, the upper sh'er; stam hds num; pist hds 2-4, sessile or more com peduncled, compact, 20-40 mm in diam when mature; sty 1; stig 1-2; nutlets sessile, 6-10 mm long; perianth, seg as many as angles of fr or with 2-3 outer ones, spatulate or eroded, equalling the fr.  
**S. SIMPLEX** Huds. Fl Angl ed 2, 401. Parry, Wyo 18. B 2:188. Eu. Sib.  
 Variety *angustifolium* E. Parish, Er 6: 85, "Bluff lake, 7400' alt, SBer mts."  
**SPARTINA GLABRA** Muhl.  
**SPARTINA FOLIOSA** Trin.

Genus **SPECULARIA** Heister.

Ann with lfy slender sts; fls in the axils of the lvs, bl or p'ish, 1 or 2 bracteolate; our sp with 2 kinds of fls: the earlier fertilized in the bud, with undeveloped cor and 3-4 cx-lobes; the latter with ordinary fls and 5-lobed cx; cor rotate or nearly so, 5-lobed or -parted; stigs and cells of the ova 3, sometimes 2-4; cap prismatic or cylindraceous, dehiscent by sm valvular openings on the sides at the middle or near the summit. A 1:381.

*Legouzia* Durand.

Subgenus **DYSMICODON**. Flowers dimorphous. Capsule rather short, straight, not disposed to split.

**SPECULARIA BIFLORA** A. Gray.

A 1:381d. Br 1:203 Cruz; Z 1:114 Cat. P 1:446. Da 10. Z 1:208. Baja! Ab 386 as *Legouzia biflora* Britton.

Stem slender, simple or branched from

the base; leaves sessile, ovate or oblong, crenately toothed, the upper reduced to lanceolate bracts; fls 1, rarely 2, in each axil, nearly sessile; corolla purple. Cat.  
**SPECULARIA PERFOLIATA** A./D. C.  
 T. Fl NY 1:428 t 65. Greene, Cal ac b 2:406 Cruz. B 1:447. Ore-Mex. Baja! A 1:381d.

Stouter, with clasping cordate leaves.  
**SPEIODELA** Schleiden.

Anth-cells bilocellate by a vertical partition and dehiscent longitudinally; ova 2-ovuled; frond 7-11-nerved or more; rtlets several, with axile vascular tissue; otherwise nearly as *Lemna*.

**S. POLYRHIZA** Schleid. B 2:190.

Fronds round-obovate, p beneath, 2-4" in diam, distinctly about 7-nerved; rts clustered, com 3-5; bract saclike; ovules amphitropous. Cosmopolitan; Ore, Nev. Genus **SPERGULA** L.

Ann branched herbs, with subulate stipulate lvs, much fascicled in axils; fls w, in terminal cymes; sep and pet 5; sta 5 or 10; sty 3, alt with sep; cap 5-valved, valves opp sep; sds compressed, acutely margined or winged.

**S. AEVENSIS** L. sp pl 440. B 1:71. Ab 148. Da, er 1:102 LA Co.

Slender, glab or sparingly pubescent, branching from base, erect or ascending 15-45 cm hi; lvs narrowly linear or subulate, 2.5-5 cm lg, clustered at nodes, appearing verticillate; stipules minute, connate; fls 4-6 mm broad, num, in loose terminal cymes; pedicels slender divaricate; sep ovate, 3-4 mm lg, slightly longer than pet; sta 10 or 5; cap ovoid, longer than the ex. Eu. Corn-spurry.

**S. SAGINOIDES** L. B 1:70 as *Sagina* Linnael.

**SPEEGULARIA** Pursh. A 1:157 as *Tissa*.

**S. RUBRA** T. Pac Ry R 4:70. B 1:71 as *Lepigonum macrothecum*.  
**SPHACELE** Bth. A 1:146d.

**S. CALYUNA** Bth. Par 46 t. Br 1:215 Rosa (cites *fragrans* as a synonym). B 1:598, 2:477. A 1:146d.

Variety **WALLACEI** G. Ab 346. Da 14. A 1:147.

**S. FRAGRANS** P 1:38. A 1:364d. McClatchie, Er 2:124 Cat. Br 1:215 as *calycina*. Greene Cal ac b 2:409.

Type locality: "south side of Cruz."

Genus **SPHAERALCEA** S. N. Hiltaire.

Fl Bras Mer 1:209 (1525).

Differs from *Malvastrum* in the 2-ovuled cells of ova, the lower ovule ascending, the upper pendulous and oft abortive in fr.

**S. ACEEFOLIA** Nutt. Parry, Wyo 20.

**S. ALBIFLORA** Rose. CNH 1:81, *Rosa*-*lia*.

**SPHAERALCEA AMBIGUA** A. Gray.

Tomentulose; thick crenulate-toothed lvs, fls rose to w, pet 1/2-1 lg; cx 4-6" lg. So Cal. Ar. Nev. Quintin! Ha 95.

**S. ANGUSTIFOLIA** Spach. B 1:86.

Slender, erect 2-4" hi, hoary-pubescent; lvs oblig to nar-lanceolate, 2" lg, com subcordate or rounded at base, oft somewhat lobed below, crenate or rather coarsely toothed, on sh petioles; fls sm, in a naked or oft lfy nar raceme; cx 2-3" lg, with acute or acuminate lobes: fr

subglobose with a central depression, pubescent; carpels  $1\frac{1}{2}$ -2" lg, oblg, blunt or sharply beaked at apex, reticulate on sides below. Ft Mohave to Rio Grande. Mex.

**S. CALIFENICA** Rose, CNH 1:66.

"Two to 4 and sometimes even 10-12" hi, densely stellate-pubescent, becoming somewhat glabrate below; lvs triangular-oblg,  $1\frac{1}{2}$ -2 $\frac{1}{2}$ " lg, cordate or truncate at base, more or less 3-lobed, crenately-toothed, densely stellate-pubescent; infl open paniculate; fls orange-y; cx 2-3 $\frac{1}{2}$ " lg, its lobes ovate-acuminate; pet 5" lg, obovate; cap sm, depressed; carpels 12-16, strongly reticulated below, the sterile part a mere incurved acutish tip; ovale and sd 1. S. Coulteri Br 2:135.—CNH 1:66. Baja, La Paz.

**S. COULTERI** G. Rose CNH 1:87, Son (Br 2:135 = Californica fide Rose 1:66). **SPHAERALCEA EMORYI** Torr.

Pl Fendl 23. B 1:86 (Coulter, CNH 1:32 as in part ambigua).

**SPHAERALCEA FENDLERI** A. Gray.

Variety **CALIFORNICA** Parish.

"About 1 m hi; sts glabrate below; lvs oblg, 2-3 cm lg, more or less distinctly subhastately lobed, unevenly and obtusely toothed; fls salmon-r; carpels 5 mm lg, indistinctly apiculate, the lower half strongly reticulate; sd nearly circular, 2 mm in diam, hirsute."—Parish, Z 5:71. Colton, Sber Co.

**SPHAERALCEA FREMONTII** Torr.

See *Malvastrum fremontii*.

*Sphaeralcea lindheimeri* Parish 139 (not G).

San Bernardino (Parish).

**SPHAERALCEA FULVA**

"Erect and stout, 2-4' hi, sparingly branching, suffrutescent, clothed densely thruout with a y'ish stellate pubescence; lvs sm, of thick and firm texture, of triangular-lanceolate outline, coarsely toothed; cx 4" lg, cleft a little below the middle into triangular acute seg; cor  $\frac{3}{4}$ " lg, light scar: fr ? In clay soil, back from the sea; infrequent. Cedros."—P 1:201. CNH 1:14.

**S. INCANA** G. Pl Fendl 23. B 1:86 as Emoryi. G, bot Ives Colo exp 8 = Abutilon Newberry fide B 1:87.

**SPHAERALCEA LINDREIMERI** G.

Sber mts (Parish 139). Parish's plant seems to have been referred later to *Malvastrum fremontii*. B 1:86.

**S. HAINESII** Br 2:137, Jesus Maria, Baja.

**SPHAERALCEA ORCUTII** Rose.

"Per (?), 60-90 cm hi, with dense, stellate pubescence thruout; lvs thickish, ovate, entire or somewhat 3 lobed, with slightly cordate or truncate base, obtuse; fls sm, in close, glomerate clusters, on short or long racemes; cx 4mm lg, with ovate lobes; pet 8 mm lg brick-r; sty clavate, thickened; carpels 12, reniform, strongly reticulated except the minute terminal portion, 2 mm in diam, 1-sded. Collected near Carriso [not Cansol creek, CD, 1 N 1890, by Or (No. 2210)]. This species, although referred to *Sphaeralcea*, can hardly be kept out of *Malveopsis*. The carpel is more like that of the latter genus than of any other known species, and yet very sim-

ilar to those of *S. Coulteri* and *S. Californica*."—Rose, CNH 1:289.

**SPHAERALCEA SULPHUREA** S. Wat. Watt 11:125, Guad. B 1:86.

**SPHAERALCEA VARIABILIS** Ckl, Am Nat (Ap 1900) 291. SCAB 1:106, the com pl of Salt river valley, Ar", suspects *S. Fendleri* Californica Parish, SCAB 1:74 is identical.

**S. VIOLACEA** Rose, CNH 1:81. Rosalia. S. WRIGHTII G, Pl Wright 2:21. B 1:86 as Emoryi.

Genus **SPRENOSCIADIUM** Gray.

**SPHAENOSCIADIUM** A 1:270d.

**S. CAPITELLATUM** G 6:536. A 1:270d. B 1:265 as selinum c. Ab 238.

Selinum capitellatum B & H, Gen 1:915.

**SPHAERANGIUM** Schimp.

**S. MUTICUM** Schimp. Eu. Africa. B 2:358.

**SPHAEROMERIA**

**S. CANA** M 1:7.

**S. CAPITATA** M 1:7.

**S. POTENTILLOIDES** M 1:7.

**S. SIMPLEX** M 1:7.

**SPHAEROSTIGMA** F & M. A 1:330d.

**S. ALYSSOIDES** Walp Rep 2:78. Ab 272. T 1:330d.

**S. HISTORTA** Walp Rep 2:77, M 3:106. Ab 270. A 1:330d.

Variety **REEDII** M 3:60 Sber mts.

**S. CAMPESTRE** Ab 271. A 1:331d.

Variety **PARISHII** Ab 272. A 1:331d.

**S. CONTORTUM** Walp Rep 2:78. Ab 271. A 1:331d.

Variety **GREENEI** Ab 271. A 1:331d.

**SPHAEROSTIGMA ERYTHRA** Davidson.

"Ann, slender, upright, branching freely 6-12' hi, whole plant minutely puberulent and glandular thruout, st com p'ish especially in the taller specimens, epidermis not flaking; lower lvs ovate-lanceolate 1-1 $\frac{1}{2}$ " lg,  $\frac{1}{4}$ " wide, tapering to petiole, slightly repand-denticulate, midrib prominent beneath; floral lvs similar, above entire and much sm'er; petioles of radical lvs 1" lg, those of the lower cauline  $\frac{1}{2}$ " lg; fls num, axy, minute, pet 1" lg, light r, becoming darker in age; sep reflexed in fl, cx finely puberulent and glandular, tube obconic very sh; cap 2!lg,  $\frac{1}{2}$ " broad, obtusely angled, slightly curved with almost truncate tip, sessile, not adnate to lf. In habit this pl somewhat resembles *S. strigulosa* T & G, but in foliage and fl it is quite different. Collected by the author in Ap 1900 on the rocky slope of the SF river near Clifton, Ar, at an alt of 3500-3800".—Da, SCAB 1:118 t 9.

**S. HALLII** M 3:107, Banning, Cal.

**S. HIETELLUM** Small. M 3:108, 116. Ab 271. A 1:331d.

Variety **MONTANUM** M 3:108 based on *bistorta* var: Reedil.

**S. MICRANTHUM** Walp Rep 2:77. Ab 271. A 1:331d. M 3:107.

**S. MINOR** M 1:1s.

**S. NELSONI** M 1:1.

**S. PALLIDUM** Abrams. M 3:108.

**S. NITIDA** A 1:331.

**S. SPIRALE** F & M, Ab 270. A 1:331d.

**S. VEITCHIANUM** Small. M 3:106. Ab 270. A 1:332d.



- S. VIRIDESCENS** Walp Rep 2:77. Ab 270. A 1:332d.
- SPEAGNUM** Dillenius.  
Characters as of the order; about 50 sp.
- S. ACUTIFOLIUM** Ehrh. B 2:422. Eu. Atlantic States, Cal., Ore.
- S. AURICULATUM** Lesq. Cal ac mem 1:4 (not Schimp) = *Mendocinum* fide B 2:422.
- S. CAPILLIFOLIUM** Hedw; Engl bot t 1406. = *acutifolium* fide B 2:422.
- S. COMPACTUM** Brid. B 2:422, Yosemite; Eu.
- S. CONTORTUM** Schultz. B 2:423 as subsecundum.
- S. CYMBIFOLIUM** Ehrh. B 2:421 Eu; Atlantic states; Cal.
- S. FIMBRIATUM** Wilson. Bryol Brit t 60. B 2:422, Mt Brewer, 11,000' alt; Eu; north Atlantic states.
- S. LATIFOLIUM** Hedw. Engl bot t 1405. B 2:421 as *cymbifolium*.
- S. MENDOCINUM** Sulliv & Lesq. B 2:422, Cal.
- S. MOLLUSCUM** Bruch. B 2:422, Ore, NJ, Eu.
- S. SQUARROSUM**.  
Variety **SQUAREULOSUM** Schimp, syn ed 2, 836. B 2:423 as sp.
- S. SQUAREULOSUM** Lesq. B 2:423, Cal; Eu.
- S. SUBSECUNDUM** Nees & Hornsch, Bryol Germ 1:17 t 3. B 2:422, Cal; Atlantic states; Eu.  
Variety **LONGIFOLIUM** Lesq. Cal ac mem 1:4. B 2:423; lvs nar'ly lanceolate, elongated; swamps near Mendocino city, Cal.
- SPIESIA** Neck. Elem 3:13 (1790). = *As-tragalus* fide IK.
- S. BELLII** Britton, Can Rec Sci 1894, 148. P 3:212 as *Aragallus* B.
- S. CAMPESTRIS** OK 1:206. P 3:211 as *Aragallus* c.
- S. FOETIDA** OK 1:206. P 3:211 as *Aragallus* f.
- S. GRANDIFLORA** OK 1:206. P 3:210 as *Aragallus* g.
- S. MONTANA** OK 1:207. P 3:210 as *Aragallus* montanus.
- S. SONGARICA** OK 1:207. P 3:211 as *Aragallus* S.
- S. SPLENDENS** OK 1:207. P 3:211 as *Aragallus* s.
- S. URALENSIS** OK 1:207. P 3:210 as *Aragallus* u.
- SPILANTHES** Jacq, Enum Pl Carib 8 (1760).
- S. PSEUDO-ACMELLA** H & A. bot Beech 150. B 1:397 as *Perityle acmella*.
- SPINACIA** L, syst ed 1 (1735).
- S. OLERACEA** L, sp pl 1027. B 2:44.
- Genus **SPIRAEA** Linnaeus.
- S. ARIAEOFOLIA** Smith, in Rees Cyc; Lindl, bot reg t 1365. B 1:170 as discolor variety *ariaefolia*.
- S. ARUNCUS** L, sp pl 490. B 1:170, 2:443. Alk. Asia. Eu. Trinity and Shasta Co, Cal.
- S. BETULAEOFOLIA** Pallas, Fl Ross t 16. B 1:169, Asia; Japan; Alk; Aleghany mts; Sierra Nevada 5000 to 9000". M 4: 81.
- S. CAESFITOSA** Nutt, T & G Fl 1:412. Wat bot king 81. B 1:170. NM, Ut. Nev. Ore. Parry, Pl Wyo 11.
- S. CALIFORNICA** T, Emory R 140. B 1:169 as *Vauquellinia Torreyi* Wat 11: 147. Ar.
- S. CAPITATA** Pursh, Fl 1:342 (1814). Nutt, Gen 1:307 (1818). P 2:28 as *Neillia* c.
- S. CHAMAEDRIFOLIA** Pursh (not L) = *betulaefolia* fide B 1:169.
- S. CINERASCENS** Piper, Er 7:171 (1899). M 1:53 as *Lutkea* c. Wash.
- S. CORYMBOSA** Raf, Prec Decouv 36. B 1:169 as *betulaefolia*.
- SPIRAEA DISCOLOR** Pursh.  
Fl 1:342 (1814). Cruz. Ore. Da 5. B 1: 170. 2:443.  
Fls mostly dull w or light buff; carpels hairy.
- Type locality: "on the banks of the Kooskoosky," a river in Idaho, now known as the Clearwater.
- Holodiscus discolor* Maxim, Adn Spir 257 [150] (1879).
- Variety **ARIAEOFOLIA** Wat. B 1:170. Oft tall (5-15" hl); lvs 2-3" lg; somewhat canescent beneath or scarcely so; panicle large and open. Based on sp of Smith in Rees Cyc.
- Variety **DUMOSA** Wat, B 1:170.  
SD and SBer Co (Parish 150); Ore; Colo; NM.
- Spiraea dumosa* Hooker, Lond J bot 6: 217 (1847)—Nuttall, MS.
- S. DOUGLASII** Hook Fl 1:172, bot mag t 5151. B 1:169. Par 87.
- Variety **MENZIESII** Presl, Epimellae bot 195. B 1:169.
- Variety **NOBLEANA** Wat. B 1:169.
- S. DUMOSA** Nutt, T in Stansbury R 387 t 4. Wat, bot king 80. B 1:170 as discolor variety *dumosa*.
- S. LUCIDA** Dougl ex Hook Fl 1:172. Par 87. = *betulifolia* fide IK.
- S. MENZIESII** Hook Fl 1:173. B 1:169 as *Douglasii* var.
- S. MONOGYNA** T, NY Lyc ann 2:194 (1827). P 2:29 as *Neillia* m.
- S. NOBLEANA** Hook, bot mag t 5169. B 1:169 as *Douglasii* var.
- S. OPULIFOLIA** L, sp pl 489 (1753). Mill, Dict ed 8. B 1:171 as *Neillia* o. P 1:42 as *Physocarpus opulifolius* Maximowicz; 2:27 as *Neillia* o.
- Variety **MOLLIS** T & G Fl 1:414. P 2:28 as *Neillia* capitata.
- Variety **PAUCIFLORA** T & G Fl 1:414. P 2:29 as *Neillia* monogyna.
- Variety **TOMENTELLA** Seringe. P 2:28 as *Neillia* opulifolia.
- S. PAUCIFLORA** Nutt, in T & G Fl 1: 414 (1840). P 2:29 as *Neillia* monogyna.
- S. PECTINATA** T & G, Fl 1:417. B 1: 171. 2:443. P 2:19, Mt. Rainier.
- S. RIBIFOLIA** Nutt, T & G Fl 1:414 (1840). P 2:28 as *Neillia* capitata.
- Genus **SPIRANTHES** Rich.  
Sts scape-like, bearing many w fs in an oblique spiral row: sep and pet all nar, erect, or more or less connivent: lip oblg, channelled, parallel with the column, and with callous processes at base: column curved, stlg ovate, becoming bidentate at apex; anth dorsal, pollinia 2, each 2-lobed, powdery.
- S. BECKII** Lindl Orch Pl 472 (1840). House, M 1:128 as *Ibidium* B (excl syn).
- S. BREVIFOLIA** Chapm Fl SUS 462

(1860). House, M 1:128 as *Ibidium longilabris*.

**S. CERNUA** Rich, mem mus Par 4:59. B 2:135, eastern states.

Variety **PARVIFLORA** Chapm. M 1:128 as *Ibidium ovatis*.

**S. DECIPiens** Hook Fl 2:203. = *Good-yera Menziesii* fide IK.

**S. GEMMIFERA** Lindl, syn Brit Fl 257 (1829). House, M 1:129 as *Ibidium Romanz.* B 2:135 as *Romanzoffiana*.

**S. GRAYI** Ames Rhodora 6:44. House, M 1:128 as *Ibidium Beckii*.

**S. LACINIATA** Ames, Orch 120 (1905). House, M 1:128 as *Ibidium laciniatum*.

**S. LONGILABRIS** Lindl Orch Pl 467 (1840). House, M 1:128 as *Ibidium l.*

**S. ODORATA** Lindl Orch Pl 467 (1840). House, M 1:128 as *Ibidium o.*

**S. OVALIS** Lindl Orch Pl 466. House, M 1:128 as *Ibidium o.*

**S. PARVIFLORA** Ames Orch 137 (1905). House, M 1:128 as *Ibidium ovatis*.

**S. PARRIFOLIA** Lindl, Orch 467. B 2:35.

**S. PRAECOX** Wat, G man ed 6, 503.

**S. TORTILIS** Chapm, Fl SUS 462. M 1:129 as *Ibidium praecox*.

**S. UNALASCENSIS** Spreng, Syst 3: 708. B 2:133 as *Habenaria u.*

**S. ROMANZOFFIANA** Cham, Linnaea 3: 32 (1828). House, M 1:129 as *Ibidium R.*

Parry, Pl Wyo 18. Par 94t. Ab 95 as *Gyrostachys R.*

Genus **SPIRODELA** Schleiden.

Stipe attached (peltately) to frond back of and under basal margin; reproductive pouches 2, triangular, opening as clefts in either margin of basal portion of frond; rts more than 1, fascicled; spadix of 1 pist and 2 stam fls from the reproductive pouches; spathe sac-like; fl curving upward from margin of frond; anth 2-celled, longitudinally dehiscent; fr rounded lenticular, with wing margins.

**S. POLYTRICHA** (L.) Schl. Ab 77.

Fronds solitary or united in colonies of 2-5 roundish obovate, flat on both sides, sessile or nearly so; 5-15-nerved, 3-6 mm lg, 2.5-4.5 mm wide; rts 4-16; rootcap large, sharp pointed; spathe a complete sac, opening at upper end; pist flask-shaped; fr somewhat winged; sd slightly compressed, smooth. Near SBer (Parish). This, as well as all the other members of the family occurring with us, is rarely fertile.

**SPIROSTACHYS** Wat 9:125 (1874).

**SPIROSTACHYS OCCIDENTALIS** S. W. Wat 9:125. Da 15. B 2:58, 482. LA Co (Parish 767). Magdalena Isl (Br.)

**S. BITTERIANA** B 2:58. So Am & W. I.

**SPLACHNUM** L.

**S. LUTEUM** L. Amoen 2:277 t 3. B 2: 387.

**S. MELANOCAULON** Schwaegr, suppl t 109. B 2:387 as *luteum*.

Genus **SPRAGUEA** Torrey.

Smith Cont 6:4 t 1. A 1:266d.

**S. MONTANA** M 1:132. based on umbellata var.

**S. NUDA** Howell, Er 1:39 (1893). M 1: 132 as *montana*.

**S. PANICULATA** K 2:187. Cur 1:132. B 1:78.

**SPRAGUEA UMBELLATA** Torr. Torrey, Pl Fremont 4 t 1.

Smith Cont 6:4 NM. B 1:77. 2:436. Par 72t. A 1:266d.

*Calyptridium umbellatum* Greene, Torr cl b 13:144.

Variety **MONTANA** Jones, T cl b 9:31 (1882). M 1:132 as sp.

### Genus STACHYS Linnaeus.

Ann or per, com pubescent or hispid herbs, with mostly p'ish fls loosely clustered in terminal dense or interrupted spikes: cx mostly campanulate, 5-toothed, the teeth nearly =, erect or spreading, pointed: cor-tube not dilated at the throat, nar; limb strongly 2-lipped, upper lip erect or slightly turned back, overarched or concave, entire or emarginate, lower lip spreading, 3-lobed, middle lobe broader than the oft deflexed lateral ones, sometimes 2-lobed: sta 4, didynamous, ascending under upper lip, anterior pair longer, sometimes deflexed or twisted after anthesis; anth contiguous in pairs: ova deeply 4-lobed; sty 2-cleft, the lobes subulate; nutlets ovoid or oblg.

### STACHYS ACUMINATA Greene.

Greene, Cal ac b 2:410 (28 My 1887): — "Sts 2-3 ft hl, from rtstocks, retrorsely scabrous or hispid on the very acute angles: lvs ovate-acuminate, or triangular-lanceolate, mostly cordate, coarsely crenate, 2-3' lg, on petioles of 1' or more, deep g and glabrate above, velvety-canescens beneath: spike naked, a ft or 2 lg in age, the 4-6-fl verticils 1' apart: cx-teeth triangular, spine-tipped, less than half as lg as the campanulate tube; cor light p, more than 1/2 lg, tube well exserted; lower lip about 4" lg. Among loose rocks of the northward slope of Cruz: fl in Jl."

Cruz: is bullata fide Br.

### STACHYS ADJUGOIDES Bth.

Prod 3:474. B 1:605. Da 14. Ab 234.

Softly white-hairy; leaves w-tomentose, oblong obtuse: fls-scented: cor w or w'ish.

### STACHYS ALBENS A. Gray.

White-woolly, leafy, often tall: leaves w-tomentose, rather acute: cor w or w'ish.

G 7:387. Ha 113. Ab 342. B 1:605.

### STACHYS BULLATA Benth.

Bth Lab 547. B 1:606. Par 236. Ha 114. Br 1:216 Rosa.

Mostly hispid, light rose fls in interrupted spikes.

### S. BRACTEATA P 3:342. Cal. Nev.

### STACHYS CALIFORNICA Bth.

Bth DC 12:469. P 1:73. B 1:606 as bullata. Da 14. Ab 342.

Sts rather slender, simple from base or branched, 4-8 dm hl, sparsely retrorsely hispid, especially on angles, and more or less glandular with sessile glands; lvs ovate-oblong, subcordate at base, lowest rather long-petioled, sparsely villous-hispid, crenate; fls about 6 in the whorls, these rather remote; cx campanulate-turbinate, teeth triangular, cuspidate, spreading in age; cor p, its tube about twice the length of cx, with a horizontal hairy ring at its base within.

### S. CHAMISSONII Bth. B 1:606.

### S. CILIATA Dougl. B 1:606. Ore.

### S. COCCINEA Jacq. B 1:606. Mex. Ar.

### S. INGLETA P 3:341. Sierra Nevada.



Cal.

**S. LANUGINOSA** P 3:342. Mts Fresno Co, Cal.

**S. LITTORALIS** P 3:341. Modoc Co, Cal.

**S. MALACOPHYLLA** P 3:343 (velutina Er 2:121).

**S. NUTTALLII**

Variety **LEPTOSTACHYA** Bth 331. B 1:606 as bullata.

**S. PALUSTRIS** L. B 1:606. Ore.

**S. PYCNANTHA** Bth 331. B 1:605.

**S. RAMOSA** M 1:116.

**S. RIVULARIS** M 1:33.

**S. SCOPULORUM** P 3:342. Colo.

**S. STRIATA** P 3:341. Plumas Co, Cal.

**S. VELUTINA** Greene, Er 2:121, P 3:343 as malacophylla.

**STANFORDIA** Wat B 2:479 (1880).

**S. CALIFORNICA** Wat, B 2:479.

**STANLEYA** Nutt, Gen 2:21 (1818). A 1:115d.

**S. FRUTICOSA** Nutt, Phil ac J ns, 1:180. B 1:38 as pinnatifida.

**S. HETEROPHYLLA** Nutt, T & G Fl 1:97. B 1:38 as pinnatifida.

**S. INTEGRIFOLIA** James, Long's exp 2:17. B 1:38 as pinnatifida.

**S. PINNATA** Britton, NY ac tr 8:62. A 1:116d. Ab 165.

**S. PINNATIFIDA** Nutt, Gen 2:71. A 1:116 as pinnata. Da 2. B 1:38. Parry, Pl Wyo 21.

**S. VIRIDIFLORA** Nutt, T & G Fl 1:98. Parry, Pl Wyo 10. B 1:38, Nev.

**STAPHYLEA** L, sp pl, ed 1, 270 (1753).

**S. BOLANDERI** G 10:69. B 1:108, 2:439.

**S. GENICULATA** K 2:22 (1859). Cur 1:133. P 1:163 as Viscainoa g.

#### Genus **STATICE** Linnaeus.

Lvs broad, fleshy, in a radical tuft: fls secured, in sh spikes or clusters terminating the many branchlets of a branching scape; ex hairy on angles below; sty wholly distinct. Marsh Rosemary.

**S. ARMERIA** L, sp pl 274. B 1:465 as *Armeria vulgaris* Willd.

**S. CALIFORNICA** Boiss in DC 12:643. B 1:466 as *limonium* var.

**STATICE LIMONIUM** Linn.

Leaves obovate-oblong; spikelets 2-3-fld. Salt marshes, abundant; Marsh rosemary.

L, sp pl, ed 1, 274. B 1:466. Eu.

Variety **CALIFORNICA** G. B 1:466. Da 11.

Rt  $\frac{1}{2}$ -1' thick, reddish, woody; lvs obovate to obl-spatulate, obtuse or sometimes retuse, tapering below into a rather lg petiole, 4-9' lg; scapes 1-2' hi, loosely paniculate; fls lavender. SF; LA Co; Baja! Common in marshes along the coast.

#### Genus **STELLARIA** Linnaeus.

L, sp pl, ed 1, 421. A 1:265d.

*Aisne* Linnaeus.

**S. BOREALIS** Bigelow, Fl Bost, ed 2, 182. B 1:68.

Variety **CRISPA** Fenzl. B 2:435 as sp.

**S. CRISPA** C & S, Linnaea 1:51. B 2:435. Alk. Plumas Co, Cal. Ha 79.

**S. JAMESII** T, T & G Fl 1:183. Wat, bot king 38. B 1:68, Colo; NM; Cal.

**S. KINGII** Wat, bot king 39 t 6, Nev. B 1:68.

**S. LITTORALIS** T, Pac Ry R 4:69. B

1:68.

**S. LONGIPES** Goldie, T, bot Wilkes exp 245. B 1:68. Yosemite to Arctic sea; Asia; Me; Labrador.

**STELLARIA MEDIA** Linn.

B 1:67. Smith, Engl bot t 537. Greene, Cal ac b 2:392 Cruz. Br 1:208 Rosa. Parish, Z 1:125. Da 3, Er 1:57 LA Co. Cat. Aisne media L (fide Ab 145). A 1:24d.

**STELLARIA NITENS** Nutt.

T & G Fl 1:185. B 1:67, 2:435 Plumas Co. Da 3. Greene, Cal ac b 2:392 Cruz. Ab 145 as Aisne n. A 1:23d.

**S. UMBELLATA** Turez, Ledel Fl Ross 1:394. Wat, bot king 38. B 1:67. Asia. Colo. Yosemite.

#### Genus **STEMODIA** Linnaeus.

**STEMODIA DURANTIFOLIA** Swartz.

Obs bot 240. B 1:570. Ar.

Southern Cal; Arizona; tropical Am.

Erect, a span to 1' hi: lvs lanceolate, sharply serrate, mostly nar'd below and then with a dilated partly clasping base: fls sessile: cor p'ish,  $\frac{1}{2}$ ' lg.

**S. POLYSTACHYA** Br 2:191, San Gregorio. Comodu, Baja.

**S. VERTICILLARIS** Link, Reichenb, Ic Escot 2: t 149. B 1:570 as *durantifolia*.

**STENACTIS** Cass, Dict sc nat 37:462 (1825). = *Erigeron* fide IK.

**S. GLAUCA** Nees, Gen et Sp Ast 275. B 1:331 as *E: glaucum*.

**S. SPECIOSA** Lindl, bot reg t 1577. Hook, bot mag t 3607. B 1:330 as *Er: speciosum*.

**STENANTHIUM** Kunth Enum Pl 4: 189 (1843).

**S. OCCIDENTALE** G 8:405. B 2:145, Ore, Wash.

**STENOCHLOA** Nutt, Gamb 189.

**S. CALIFORNICA** Nutt, Gamb 189. B 2:315. Cat. Guad.

**STENOTUS** Nutt, Am phil sc tr ns, 7: 334 (1841). = *aplopappus* fide IK.

**S. ACAULIS** Nutt, T & G Fl 2:238. B 1:311 as A.a.

**S. FLORIFER** T & G Fl 2:238. B 2:455 as *Townsendia* f.

**S. LACERATUS** M 1:7.

**S. LINEARIFOLIUS** T & G Fl 2:238. B 1:311 as A.l.

**S. MACLEANII** M 1:7.

**S. INTERIORE** Greene, Er 2:72 based on A.l. Cov, Biol sc pr 7:65 (1892). Dry hills, eastern Cal; Ar. A 1:195 as A.l.

**S. MULTICAULIS** Nutt, T & G Fl. = A: m fide G, in Parry, & Wyo 23.

#### Genus **STEPHANOMERIA** Nuttall.

Am Philo sc tr.

**S. CICHORACEA** G 5:552. Greene, Cal ac b 2:405 Cruz. Da 10. B 1:429.

**S. ELATA** Nutt, Gamb 173. Greene, Cal ac b 2:405 Cruz? 'oft 6" hi.' See *virgata*.

**S. EXIGUA** Nutt; Eaton, bot king 198 t 20 f 6, 7. B 1:428. Near Ft Mohave; Nev; NM; Tex.

**S. HETEROPHYLLA** Nutt. B 1:428 as minor.

**S. INTERMEDIA** K 5:39. Cur 1:141 as *Microseris nutans* G. B 1:424 as same.

**S. LACTUCINA** G 6:552. B 1:429.

**S. LYGODESMODES** Jones; Henderson, T cl b 27:349 (1900). M 1:7 as *Ptil-*

oria l.

**S. MINOR** Nutt, Am phil sc tr, ns, 7: 427. B 1:428.

**S. MYRIOCLADA** Eaton, bot king 198 t 20. B 1:429. Ut.

**S. PANICULATA** Nutt, lc, 7:428. Parry, Pl Wyo 13. Da 10. B 1:428. = *virgata*.

**S. PENTACHAETA** Eaton, bot king 199 t 20. B 1:428.

**S. RUNCINATA** Nutt, B 1:428 as minor.

**S. SCHOTTII** G, B 1:427.

**S. THURBERII** G, Pl Thurb. B 1:429, Ar; NM.

**S. TOMENTOSA** Greene, Cal ac b 2:152. 405 Cruz. See *virgata*.

**S. VIRGATA** Bth, bot Sulph 32. W 5:12. Ha 131. P 1:91 Mig. Greene, Cal ac b 2:

405 Cruz? Br 1: 213 Rosa (cites *tomentosa* "and probably *S. elata* Nutt" as synonyms). B 1:428 as *paniculata*.

**STEREODON** (Moss.).

**S. ROBUSTUS** Mitten, J Linn sc 8:41. B 2:417 as *Hypnum robustum* Hook.

**STEVIA** Cav lc 4:32 t 354-6 (1797).

**S. DECUMBENS** P 3:32.

**S. DELTOIDEA** P 3:31.

**S. ELATIOR** HBK, Nov G et sp 4:144. P 3:32.

**S. FLUMMERAE** M 4:78 Ar.

Genus **STILLINGIA** Garden.

**STILLINGIA** L, Mont 1:19 (1767). A 1: 282d.

**STILLINGIA ANNUA** Mull.

DC, Prodr 15:1160.

Watson Am ac pr 14:297.

A 1:282d. B 2:72.

**STILLINGIA LINEARIFOLIA** S. Wat.

Abrams, Fl LA 234. Sber; SD.

A 1:282d. B 2:71. Da 16.

**S. PAUCIDENTATA** Wat 14:298. Da 16. B 2:71.

**S. SPINULOSA** T, Emory R 152. B 2:72 as *annua*.

**S. TORREYANA** Wat 14:298. B 2:72. Tex.

**S. TRECVLIANA** B 2:72 error for *Sebastiana* t.

**STOKESIA** L'Herit Sert Angl 27 (1788).

**S. CYANEA** L'Her, lc, 28. Greene, Er 1: 3 as *laevis*.

**S. LAEVIS** Greene, Er 1:3 based on *Cartanhus laevis* Hill, Hort Kew 57 t 5 (1769).

**STREPTANTHUS** Nutt, Phil ac J 5:134 t 7 (1825). A 1:161d.

**S. ALBIDUS** P 1:62.

Type locality: Hillsides a few miles below San Jose, Cal., collected 30 Ap 1887 by Volney Rattan.

**S. ARGUATUS** Nutt, T & G Fl 1:77. B 1:33 as *Arabis arcuata*. A 1:3 s, 111 s. P 4:192 as *Arabis maxima*. Sber Co. Baja.

**S. ARGUTUS** P 3:227.

**S. ASPER** P 3:225.

**S. BAEISERA** P 1:217, Lake Co, Cal.

**S. BREWERI** G, Cal ac pr 3:101. G 6: 184. B 1:34.

**STREPTANTHUS CAMPESTRIS** Watson.

Ha 83. A 1:260 fdr. Sber mts. SD Co.

**S. CORDATUS** Nutt, T & G Fl 1:77. B 1:34. P 3:227. Wat, bot king 19, Br, Colo 233.

**S. CRASSICAULIS** T, Stans exp Ut 383 t 9. B 1:36 as *Caulanthus* c.

**S. CRASSIFOLIUS** P 3:227.

**S. FLAVESCENS** Hook lc t 44. H & A, bot Beech 322. B 1:35. (G 6:186 in part = *Caulanthus procerus* fide B 1:36). (T, Pac Ry R 4:65 = *Thelypodium* f, fide B 1:38).

**S. FOLIOSUS** P 3:226.

**S. GLANDULOSUS** Hook, lc Pl t 40. B 1:34.

**S. HETEROPHYLLUS** Nutt, T & G Fl 1:77, 666. B 1:34. Da 2. Ab 167. A 1: 161d. (G 6:186 = *Caulanthus Coulteri* fide B 1:36.)

**S. HISPIDUS** G, Cal ac pr 3:101. B 1: 35.

**S. INFLATUS** Da, Er 2:178 LA Co.

**S. LINEARIS** P 3:225.

**S. LONGIFOLIUS** Bth 10. B 1:38 as *Thelypodium* l.

**STREPTANTHUS LONGIROSTRIS**

Wat 25:127. Da, Er 2:178 LA Co. A 1: 260d. Wash, Nev, Ut, Son, Baja, CD.

(*Arabis* l of Wat, bot king 5:17 t 2.

Leaves not clasping nor auriculate; glabrous, glaucous, annual. Wash. to Baja Cal. Sonora. Utah.

**S. MICRANTHUS** G, Pl Fendl 7. B 1:38 as *Thelypodium longifolium*.

**S. POLYGALOIDES** G 6:519. B 1:34.

**S. PROCERUS** Brewer, in G 6:519. B 1: 36 in part as *Caulanthus procerus*.

**S. REPANDUS** Nutt, T & G Fl 1:77. B 1: 35 = *Arabis* sp?

**S. SAGITTATUS** Nutt, Phil ac J 7:12. B 1:37 as *Thelypodium Nuttallii*.

**S. TORTUOSUS** K 2:152. Cur 1:130. Jepson, Er 1:15. B 1:34. 2:431.

**STREPTOPUS** Michx, Fl 1:200 t 18 (1803).

**S. AMPLEXIFOLIUS** DC, Fl Fr 3: 174. B 2:177. = *distortus* fide IK.

**S. BREVIPES** Baker, J Linn sc 14: 592. B 2:178, Wash

**S. DISTORTUS** Michx, Hook Fl 2:173 t 188. B 2:178 as *amplexifolius*.

**S. ROSEUS** Michx, Fl 2:201 t 18. B 2: 178, Sitka to Ore; northern Atlantic states.

**STROMBOCARPA** G, Post J nat hist 5: 243 (1845). = *Prosopis*.

**STROMBOCARPUS** B & H, Gen 1:591 error for *Stromboscarpa*.

**S. PUBESCENS** G, in T Pac Ry R 5:360 t 4. P 1:163 as *Prosopis* p.

**STROPHOLIBION** T, Pac Ry R 4:149. (1856).

**S. CALIFORNICUM** T, Pac Ry R 4:49. B 2:152. Cur 1:148 as *Brodiaea valubilis*.

**STYLOCLINE** Nutt, Am phil sc tr, ns, 7:338 (1841). A 1:187d.

**S. ACAULE** K 7:112. Cur 1:139 as *Evax acaulis* Greene. = *Evax caulescens* variet minima G. B 2:456 as *Evax caulescens*.

**STYLOCLINE FILAGINEA** A. Gray.

Mohave (Parry); Oregon (Cusick). G 8:652. B 1:317, 2:456.

**S. GNAPHALIOIDES** Nutt, lc 7:338. A 1:187d. Da 9. B 1:337. 2:456. Ab 408. Br 1:203 Cruz; 212 Rosa.

**STYLOCLINE MICROPOIDES** A. Gray.

Arid plains, So Cal; Nevada; N. M. Pl Wright 2:84. R 1:337. Ar.

**STYLOPAPPUS** Nutt, Am phil sc tr ns, 7:431 (1841). = *Troximon* fide IK.

**S. ELATUS** Nutt, lc, 133. B 1:438 as T:



Nuttallii.

**S. GRANDIFLORUS** Nutt, lc 422. B 1: 438 as T: g.**S. LACINIATUS** Nutt, lc, F 1:438 as T: grandiflorum variety laciniatum G.**STYPHONIA** Nutt, T & G Fl 1:220 (1838). — Rhus.**S. INTEGRIFOLIA** Nutt, T & G Fl 1: 220; Sylv 3:4 t 82. T, Pac Ry R 7:9 t 2. B 1:110 as Rhus 1.**S. SEERATA** Nutt, T & G Fl 1:220. B 1:110 as Rhus integrifolia.**STYLOPHYLUM** B & R. A 1:91 fdr. **S. ALBIDUM** Rose. A 1:191.San Clemente Island (T. S. Brandegee). **S. ATTENUATUM** B & R A 1:92.

Cotyledon attenuata S. Watson, Am ac pr 2:472 (1887).

Near San Quintin, Baja (Or). **S. DENSIFLORUM** Rose. A 1:93 fdr. Ab 186.

Cotyledon nudicaule Abrams, So Cal ac b 2:42 (1903), non Lam (1786).

**S. EDULE** B & R. A 1:92d. Par 154. **S. HASSEI** Rose. A 1:92 fdr. Ab 185.**S. INSULARE** Rose. A 1:91 fdr. Ab 185. **S. ORCUTII** Rose. A 1:93 fdr.**S. PARISHII** Britton. A 1:92 fdr. **S. SEMITERES** Rose. A 1:92 fdr.**S. TRASKAE** Rose. A 1:91. Santa Barbara Island (Blanche Trask).**STYLOPHYLLUM VIRENS**. Rose, NY bot gard b 3:34.

San Clemente Island (Blanche Trask). A 1:91.

**STYLOPHYLLUM VISCIDUM**. A 1:91.

Britton &amp; Rose, NY bot gard b 3:33, based on

Cotyledon viscidula S. Watson, Am ac pr 17:372 (1882). Near Oceanside and San Juan, Cal. (Nevin, Orcutt). Readily distinguished by its viscid foliage.

**Genus STYRAX Tournefort.**L, syst ed 1 (1735). A 2:409d. **STYRAX CALIFORNICA** Torr.

Upper Sacramento to SD Co. Smithsonian Cont 6:4, Pac Ry R 418. B 1:470. A 2:409d.

**S. GUATEMALENSE** Smith, Bot Gaz 7: — Z 1:63. Guat.**Genus SUAEDA Forskal.****S. CALIFORNICA** Wat Rev. Chen op 89. B 2:59. Ab 131 as Dondia Californica Heller.**S. DEPRESSA** Wat, bot king 294; Rev Chenop 89. B 2:58. Ab 131 sub Dondia d. Britton.**S. DIFFUSA** Wat, Rev. Chenop 88. B 2:58.**S. MARITIMA** Wat, bot king 294. B 2: 58 as diffusa.**S. MOQUINI** P 1:264 based on Chenopodia Moquini T. P 1:289 San Bartolome Isl. Baja; identification with T's plant doubtful. Ab 131 as Dondia M of Nelson.Synonymy: Suaeda Torreyana Wat. **S. OCCIDENTALIS** Wat, Rev Chenop 90. B 2:58 Nev. Magdalena Isl. Baja ? (Br).**S. SUPERFUSCENS** Wat, Rev Chenop 88. B 2:59. Da 15. Ab 131 as Dondia Multiflora Heller.**SUAEDA TORREYANA** S. Watson. Wat 9:88. Da 15. B 2:59. P 1:93 Mig.

Greene, Cal ac b 2:11 Cruz. Br 1:216

Rosa. P 1:264 as Suaeda Moquini. Ab

131 as Dondia Moquini Nelson. M 4:42 Sber.

**SUBULATICA** Ray ex L, syst, ed 1 (1735) **S. AQUATICA** L, sp pl 642; Eu. B 1:43.Parry, Pl Wyo 13. SD mts! **SWARTZIA** (Moss).**S. CAPILLACEA** Hedw. Muse Frond 2: 72 t 26. B 2:375 as Distichum c.**S. INCLINATA** Hedw, Muse Frond 2:74, t 27. B 2:375 as Distichum l.**SWERTIA** L, sp pl, ed 1, 226 (1753). **SWERTIA COVILLEI** Greene.

"Stout-stemmed, rather few-fld, 6-16' hi; basal lvs in the largest plants 6' lg, thin and flaccid, not indistinctly 3-

nerved, the oblq-lanceolate acutish blade tapering to a lg and broadly winged petiole; fls on stout pedicels, 1 in axil of each bract; sep lanceolate, acute or acuminate, of scarcely more than half

the length of cor, this 5-parted, lobes oval or oblq-obtuse, much exceeding the sh stout-subulate fil, their glands with a

lacinate margin, some or all the lacinae slenderly setaceous-pointed; cor blue-p but not dark: sds broadly winged."

— Gifts 1:77. Crabtree Meadows, 11,000'. Tulare Co, Cal.

**S. OCCIDENTALIS** P 4:184. **S. OVALIFOLIA** P 4:185.**S. FASTIGIATA** Pursh. Gifts 1:72, Mont.**SWERTIA PARALLELA** Greene. Mont. "Sts simple, stout for the genus, 12 or

14' hi, with 2 pairs of cauline lvs, those from the rt or rtstock of half the length of st, elliptic oblq as to blade, this tapering to a lg petiolar base, all traversed

from base of broad petiole to near the end of the blade by about 5 conspicuous w'ish parallel veins; infl somewhat congested, its more terminal portion almost

thyrsoid: subulate-lanceolate sep nearly = the lurid-p'ish not dark-colored cor: fil much flattened and oblq-liguliform, obtuse at apex behind the anth: fr?"

— Gifts 1:92. **S. PERENNIS** L sp pl 226. B 1:478. P 4: 184.**S. SCOPULINA** P 4:184. Gifts 1:72, Rocky Mts.**Genus SYMPHORICARPUS Dill.**

Low branching shrubs, erect or diffuse; leaves mostly small, entire and

short-petioled; the small white or pinkish flowers usually in crowded axillary or terminal spikes or clusters.

**S. CILIATUS** Nutt, T & G Fl 2:4. B 1: 279. "a less downy form" of mollis.**S. FRAGRANS** M 3:143 Nev. **S. LONGIFLORUS** G, Am J sci 34:249. B 1:279, Nev; Ut.**SYMPHORICARPUS MOLLIS** Nutt. T & G Fl 2:4. B 1:279. Da 7. Greene, Cal ac b 2:399 Cruz. Br 1:211 Rosa. A 1:53d.Ab 381. Cuyamaca mts (Or 684). **S. MONTANUS** G, Am J sci 34:249. B 1: 279 as oreophilus.**S. OCCIDENTALIS** R Br. Hook Fl 1: 285. B 1:279. Z 1:128.**S. OREOPHILUS** G, J L sc 14:12. B 1: 279, Nev; Colo; Cal.**S. PARISHII** Rydb, T cl 26:545 (1899). Ha 122.

**SYMPHORICARPUS RACEMOSUS** Mx. Fl 1:107. A 1:54d. B 1:279. Da 7. Par 231.

Variety **PAUCIFLORUS** Robbins, G man. B 1:279, not Cal.

**S. ROTUNDIFOLIUS** G, Pl Wright 2: 66 et J Linn sc 14:9. B 1:279, Nev; Ore; Ut; NM.

**SYNOSMA** Raf, Loud Gard mag 8:247 (1832).

**S. RENIFORMIS** Rax, Loud Gard mag 8:247 (1832). P 3:182 as Mesadenia r.

**SYNTHYRIS** Bth, DC 10:454 (1846).

**S. BULLII** M 1:4, based on Gymnandra B of Eaton.

**S. CORDATA** M 1:4.

**S. GYMNOCARPA** M 1:5.

**S. HOUGHTONIANA** Bth in DC 10:454. M 1:4 as Bullii.

**S. MAJOR** M 1:5 based on Wulfenia reniformis variety major.

**S. RENIFORMIS** Bth, DC 10:454. B 1: 571, 2:474.

Variety **CORDATA** G, B 1:571. 2:475 as rotundifolia var.

**S. EOTUNDIFOLIA** G, Syn Fl 2:285. B 2:474.

Variety **CORDATA** G, B 2:475.

**S. RUBRA** Bth, DC 10:455. B 1:571.

**S. WYOMINGENSIS** M 1:5, based on Wulfenia W.

**SYNTHESISMA** A 2:415d.

**S. SANGUINALIS** A 2:415d.

Genus **SYNTRICHOPAPPUS** A. Gray.

Pac Rv R 4:106 (1856).

**SYNTRICHOPAPPUS FREMONTI** A. G. G, lc. B 1:395.

CD; Mohave; Nevada; Utah; Arizona. **SYNTRICHOPAPPUS LEMMONI** Gr.

G 19:20. M 3:9 as Microbahia L.

Mohave (J. G. Lemmon).

**SYRINGA** L, syst ed 1 (1735).

**S. FENICENSIS** Rupr. Z 1:62. = amurensis fide IK.

**SYRMATIUM** Vog, in Linnaea 10:590 (1835-63. = Hosackia fide IK.

**S. ARGOPHYLLUM** Greene, Cal ac b 2:147. A 1:300 as Lotus argophyllus.

**S. DENDROIDEUM** Greene, Cal ac b 2: 146 Cruz; 394. A 1:377 fdr. = Hosackea glabra T fide. Z 1:135.

**S. GLABRUM** Vogel in Linnaea 10:591. B 1:137 as Hosackia g. A 1:300 as Lotus glaber.

**S. MICRANTHUM** Greene. A 1:301 as Lotus m.

**S. NEVADENSIS** Greene. A 1:301 as Lotus N.

**S. NIVEUM** Greene. A 1:300 as Lotus argophyllus. Z 1:135 as Hosackia argophylla, Cruz.

**S. NUDATUM** P 1:173, 202 Cedros.

**S. PATENS** Greene, Cal ac b 2:147, 394 Cruz. P 1:87, Mig; Princes Island. Z 1: 135 as Hosackia glabra.

**S. ORNITHOPUS** Greene. Z 1:135 as argophylla. Cat and San Clemente Islands.

**S. TOMENTOSUM** Vogel in Linnaea 10: 591. B 1:139 as Hosackia t.

**TALINUM** Adans. Fam 2:245 (1763).

**T. MENZIESII** Hook, Fl 1:223 t 70. B 1:74 as Calandrinia M.

**T. SPINESCENS** T, US exp 2:250. B 1: 74, Wash.

**T. PYGMAEUM** G, Am J sci, sr 2. 33:

407. B 1:75 as Calandrinia p.

**TANACETUM** Tourn ex L, syst, ed 1 (1735).

**T. CAMPHORATUM** Less, Linnaea 6: 521. B 1:402 as Huronense.

**T. CANUM** DC Eaton, bot King 180 t 19. B 1:617, Cal; Nev. M 1:7 as Sphaeromeria cana.

**T. CAPITATUM** Nutt, T & G Fl 2:415. Parry, Pl Wyo 10. DC Eaton, bot king 180 t:19 f 1-7 fl Sphaeromeria capitata fide M 1:7.

**T. DOUGLASHII** DC 4:128. B 1:40 2 as Huronense.

**T. ELEGANS** Decaisne. Fl serres t 1191. B 1:402 as Huronense.

**T. HURONENSE** Nutt, Gen 2:141. B 1: 402.

**T. MATRICARIODES** Less. B 1:401 as Matricaria discoidea.

**T. PAUCIFLORUM** DC 6:131. B 1:401 as Matricaria discoidea.

**T. POTENTILLOIDES** G 9:204. B 1:402. M 1:7 as Sphaeromeria p.

**T. SIMPLEX** Aven Nelson; T c b 26: 484 (1899). M 1:7 as Sphaeromeria Simplex.

**T. SUAVEOLENS** Hook, Fl 1:327 t 110. B 1:401 as Matricaria discoidea.

**T. VULGARE** L, sp pl 844. B 1:402, "Tansy". Eu.

**T. NUTTALLII** T & G, Fl 2:415. Parry, Pl Wyo 4.

**TARAXACUM** L, syst ed 1 (1735).

**T. AMMOPHILUM** P 4:233.

**T. ANGUSTIFOLIUM** P 4:232.

**T. CERALOPHOEUM** DC 7:146. P 4:231. = officinale fide IK.

**T. CHAMISSONIS** P 4:228.

**T. DENS-LEONIS** Desf. Da 10, Er 1:60 LA Co. B 1:439.

**T. DUMETORUM** P 4:230.

**T. ERYTHROSPERMUM** Andr. ex Bess En Pl Volh 75, 106. P 4:227, 233. = officinale fide IK.

**T. LAGERUM** P 4:230.

**T. LATILOBUM** P 4:231.

**T. MUTILUM** P 4:232.

**T. OFFICINALE** Weber, in Wigg Prim Fl Holcat 56. P 4:227.

**T. OVINUM** P 4:229.

**TARAXIA**

**T. TARAXACIFOLIA** M 1:1.

Genus **TAXUS** Tournefort.

L, svst ed 1 (1735).

**T. BOURCIERI** Carr in Rev Hort sr 4, 3:228 (1854). B 2:110 as brevifolia.

**TAXUS BREVIFOLIA** Nutt.

Sylv 3:86 t 108. B 2:110. P 3:69.

Pacific Yew. Small trees growing along streams of British Columbia, south to the Santa Cruz mts, Cal. Lvs small, in 2 ranks. Wood tough and elastic.

**T. CANADENSIS** Willd, sp pl 4:856. B 2:110. (Bigelow in Pac Ry R 4:25. = brevifolia fide IK.)

**T. LINDLEYANA** Murr in Edinb new Phil J 1:294. B 2:110 as brevifolia.

**TAXODIUM** Rich in Ann mus Par 16: 298 (1810).

**T. DISTICHUM** Rich. lc. Z 1:91.

**T. GIGANTEUM** K & Behr, K 1:54. Cur 1:148 as Sequoia g. B 2:117 as same.

**T. SEMPERVIRENS** Lambert. Gen Pin ed 2:107, t 48; ed 3, 120 t 64. B 2:116 as Sequoia s.



- T. WASHINGTONIANUM** Winslow, Cal Farmer, S 1854; Kew J bot 7:29. B 2: 117 as *Sequoia gigantea*.
- TAYLOREA** Hook. Moss.
- T. ZERRATA** Bruch & Schimp, Bryol Eu t 284, 285. B 2:387.
- T. SPLACHNOIDES** Hook Muse Exot t 173. B 2:386. Nev.
- TECOMA** Juss. Gen 139 (1789).
- T. STANS** Juss lc. Baja (Br).
- Genus **TELLIMA** R. Brown.
- Frankl Narr 1st J App 765, in obs (1823)
- TELLIMA AFFINIS** Bolander.
- G, B 1:198. Da 6. Ha 84. Br, Z 1:113 Cat. Star of Bethlehem.
- Plumas Co; S Ber foothills (Parish 274).
- T. BOLANDERI** G, B 1:198. Cal.
- TELLIMA CYMBALARIA** Walp.
- Nom ed 2, 2:665; Walp Rep 2: 372. Br 1:203 Cruz. B 1:198.
- S Bar to Baja; Cruz (Br).
- TELLIMA GRANDIFLORA** R. Br. - R Br, lc. B 1:197. Par 348.
- Santa Cruz Co to Alaska.
- T. HETEROPHYLLA** H & A, bot Beech 246. B 1:198.
- T. PARVIFOLIA** Hook Fl 1:239 t 78. B 1:198.
- TELLIMA TENELLA** Walpers.
- Steud nom ed 2, 2:665; Walp Rep 2:371. B 1:198.
- So Calif (Parish 1821).
- TELLIMA TRIPARTITA** Greene.
- A 1:39 fdr.
- TELOXYIS** Moq in Ann sc nat sr 2, 1: 289 t 10 (1834). = *Chenopodium* fide IK.
- T. ARTISTATA** Moq. fl Chen aristatum fide IK.
- T. CORNUTA** T. Pac Ry R 4:129. B 2: 46, 482. = *Chen. cornutum* fide IK.
- T. MANDONI** Wat. 9:91. B 2:482 as *Chenopodium foetidum* Schrad.
- TESSARANTHIUM** K 2:144. = *Frasera* fide IK.
- T. RADIATUM** K 2:144. B 1:484 as *Frasera speciosa* Cur 1:142 as same.
- TEELITIS**
- T. PATULA** Grah. A 1:112 as *Arabis Holboellii*.
- TESSARIA** R & P, Pav Prod 112 t 24 (1794).
- T. BOREALIS** T & G, Emory R 143. Da 8. B 1:334. A 1:186 as *Pluchea borealis* (sericea).
- Genus **TETRACOCUS** Engelm.
- Parry, W 1:13. Wat 20:372. A 1:376 fdr.
- TETRACOCUS DIOICUS** Parry.
- W 1:13. A 1:376 fdr.
- T. ENGELMANNI** Wat 20:373. = *dioicus*.
- Genus **TETRADYMIA** De Candolle.
- DC 6:440 (1830).
- Low rigid canescently tomentose shrubs with alt narrow entire lvs: fls y in cymose-clustered discoid hds: inv long and narrow, of 4-6 bracts: cor with long tube, the narrow spreading lobes longer than the campanulate inv: ak terete, short, 5-nerved, from long-villous to glabrous: pappus of fine and soft long capillary w or w'sh bristles.
- TETRADYMIA CANESCENS** DC.
- Prodr 6:440. B 1:407.
- British Columbia to So Cal.; Texas.
- Variety **INERMIS** B 1:408.
- TETRADYMIA COMOSA** A. Gray.
- G 12:60. B 2:458. Ab 438. A 1:196d.
- Gray. Am ac pr 12:60 (1876).
- Type locality: "W. Nev." "S. E. borders of Cal." "Potrero," SD Co.
- Coville, CNH 4:141.
- Abrams, Fl LA 438.
- Nevada; S Ber; SD Co; Baja!
- TETRADYMIA GLABRATA** A. Gray.
- Pac Ry R 2:122 t 5 (1854). B 1:408. Da 10.
- Oregon; Utah; California.
- T. INERMIS** Nutt. Am phil sc tr ns, 7: 415 (1841). B 1:408 as *canescens* var.
- T. TUTTALLII** T & G, Fl 2:447. B 1: 408. Ut; Idaho.
- T. RAMOSISSIMA** T. Emory R 145 (1848). B 1:409 as *Psathyrotes* r.
- TETRADYMIA SPINOSA** H. & A.
- Bot Beech 360. Cov 141, Ut, Nev, Da 10. B 1:407.
- Type locality: "Snake country," Idaho.
- Idaho; Oregon; Mohave!
- T. SQUMATA** G 9:207. B 1:408. = *Lepidospartum* s.
- Variety **BREWERI** G, B 1:408.
- Variety **FALMERI** B 1:408. CD in Ar.
- TETRAGONANTHUS**
- T. BRENTOLIANUS** M 1:2, based on *Halenia* B.
- T. HETERANTHUS** M 1:2, based on *Halenia* h.
- T. ROTHROCKII** M 4:81 Ar.
- TETRAEURIS** P 3:265.
- T. ACAULIS** P 3:265 based on *Galaridia* a of Pursh.
- T. ANGUSTATA** P 3:267, Chihuahua.
- T. ARIZONICA** P 3:266, Ar.
- T. EREVIFOLIA** P 3:266, Pike's Peak.
- T. DEPRESSA** P 3:266 based on *Actinella depressa* T & G. Colo. Ut.
- T. FASTIGIATA** P 3:268, Kansas.
- T. GLABRA** P 3:268 based on *Actinella* g. Rocky mts.
- T. HERACEA** P 3:268, Ill; O.
- T. IVESIANA** P 3:269, on Rio Zuni.
- T. LANATA** P 3:265 based on *Actinella* l of Nutt.
- T. LEPTOCLADA** P 3:269 based on *Actinella* l of G. Colo. NM, Ar.
- T. LINEARIFOLIA** P 3:269 based on *Hymenoxys* l of Hook.
- T. LINEARIS** P 3:267 based on *Actinella* scaposa variety l of Nutt. Tex; NM.
- T. OBTONGIFOLIA** P 3:269, Nuevo Leon, Mex.
- T. SCAPOSA** P 3:266 based on *Cephalophora* s. (*Actinella scaposa* Nutt). Tex. NM.
- T. TORREYANA** P 3:265 based on *Actinella* T.
- T. TRINERVATA** P 3:267, NM.
- TETRANTHERA** Jacq. Hort Schoenb 1: 59 t 113 (1797). = *Litsea* fide IK.
- T. CALIFORNICA** H & A, bot Beech 159. B 2:61 as *Umbellularia* C.
- TETRAPHIS** Hedw.
- T. PELLUCIDA** Hedw. B 2:376.
- TEUCRIUM** L, syst ed 1 (1735).
- T. CANADENSE** L, sp pl 564. B 2:478.
- Buenos Ayres. Tex. Cal. WL. Mex. Yuma, Ar (Parish 756).
- TEUCRIUM CUBENSE** Linn.
- Jacq. En Pl Carib 25. B 2:478.
- T. LACINIATUM** T, Ann Lye NY 2:231 (1828). B 2:478.
- T. GLANDULOSUM** K 2:23. Mex. Baja

(Br). P 1:206 Cedros. Cur 1:145.

**T. OCCIDENTALE** G, Syn Fl 2 (1):349. B 2:477.

**T. THALESIA** Raf, Am mag 1818, 267, = Aphyllon fide IK.

**T. FASCICULATA** Britton. Ab 374. M 3:77, 4:80.

**T. UNIFLORA** Raf, lc. = Aphyllon u fide IK.

**THALICTRUM** Tourn ex L, Gen, ed 1, 164 (1737). A 1:148d.

**T. FENDLERI** B 1:4 in part = platycarpum fide P 1:166, of Anders, Cat pl Nev 117 = same fide IK.

**T. FENDLERI** E ex G, Am ac mem ns, 4:5 (1849). B 1:4. 2:425. A 1:148 as polycarpon (as regards So Cal plant).

Variety **FLATYCARPUM** Trelease, Bost sc nat hist pr 23:304. P 1:166 as sp.

**T. FISSUM** P 4:233.

**T. HESPERIUM** P 2:24 based on platycarpum (of P 1:166 not of Hook f & Th.)

**T. OCCIDENTALE** G 8:372. A 1:148d. B 1:4. 2:425. = dioicum fide IK.

**T. FLATYCARPUM** P 1:166; 2:24 as hesperium.

**T. POLYCARPUM** Wat 14:288. B 2:424. Da 1. Ab 156. A 1:148d.

**T. SPARSIFOLIUM** Turcz ex F & M, Ind sem Hort Petrop 1:40. B 2:425. A 1:148d.

**T. POLYGANUM** M 4:72 Pa.

**THAMNIUM** Schimp. = Hypnum fide B 2:416.

**T. ALLEGHANIENSE** Bruch & Schimp. B 2:416 as H: a.

#### Genus THAMNOSMA Torrey.

T & Fremont, in Frem 2d R 313 (1845).

**THAMNOSMA MONTANUM** Torr.

T & F, lc. B 1:97. CD! Ft Mohave. Ut. Baja!

**T. TEXANA** T, bot Mex bound 42. Br, Colo 234. B 1:97.

**THELAIA** Alef in Linnaea 28:33 (1856). = Pyrola fide IK.

**T. BRACTEATA** Alef lc 28:57. B 1:460 as Pyrola rotundifolia variety bracteata G.

**T. SPATULATA** Alefeld, lc. B 1:461 as Pyrola picta.

**THELESERMA** Less, in Linnaea 6:511 (1831).

**T. FORMOSUM** P 5:56.

**THELYPODIUM** Endl. A 1:114d.

**T. AFFINE** P 4:314.

**T. ANISOPETALUM** P 3:247.

**T. COOPERI** Wat 12:246. A 1:114. B 2:431.

**T. CERNATUM** P 4:20.

**T. ATBIGUUM** Wat 14:290. B 2:431.

**T. BRACHYCARPUM** T, US exp 2:231. B 1:37. 2:431.

**T. FLAVESCENS** Wat, bot king 25. B 1:38.

**T. INALIENUM** Ab 166.

**T. INTEGRIFOLIUM** Endl. A 1:114d. Da 2. B 1:37. P 4:20, 314.

**T. LACINIATUM** Endl Gen Pl 876. Walp Rep 1:172. B 1:37. Br, Z 1:113 Cat.

Ore. M 3:4 not Cat.

**T. LASIOPHYLLUM** Greene, T cl b 13:142; Cal ac b 2:390 Cruz; P 1:85 Mig. Ab 166. A 1:114d, 124. Da 2. M 3:4 Cat.

Variety **INALIENUM** Rob. A 1:115d.

**T. LONGIFOLIUM** Wat, bot king 25. B 1:38.

**T. MICRANTHUM** P 3:248.

**T. NUTTALLII** Wat, bot king 26. B 1:37.

**T. NEGLECTUM** Jones, Am nat 17:875 (1882). Cal. A 1:115 as lasiophyllum.

**T. RHOMBOIDEUM** P 4:314.

**T. RIGIDUM** P 1:62.

**T. SAGITTATUM** Endl, Walp Rep 1:172. B 1:37.

**T. SIMPLEX** P 4:200.

**THELYPODIUM STENOPETALUM** Wat 22:468. A 1:5 fdr.

**T. PROCEBUM** Da, Er 2:178, LA Co.

**T. WRIGHTII** G, Pl Wright 1:7. A 1:115.

**THEMIS** Salisb Gen Pl Fragm 85 (1866). = Brodiaea fide IK.

**T. IXIODES** Salisb lc. B 2:155 as B. i.

**THERESIA** C. Koch in Linnaea 22:232 (1849). = Fritillaria.

**T. FUDICA** Klatt. B 2:170 as W: p.

#### Genus THERMOPSIS R. Brown.

**THERMOPSIS CALIFORNICA** S. Wat.

Wat 11:126. B 1:113. Par 154. A 1:35.

Variety **VELUTINA** Greene. A 1:35 as velutina.

**T. FABACEA** DC 2:99.

Variety **MONTANA** G; Wat bot king 53. B 1:114 as sp.

**T. MACROPHYLLA** H & A, bot Beech 329. B 1:113, 114 as montana (as to var.

B in T & G Fl). T & G Fl 1:388. (T. Pac Ry R 4:81 = Californica fide. B 1:114).

**T. RHOMBOIFOLIA** Richards. B 1:114. Ckl W 5:10.

**T. PINETOBIUM** P 4:138.

**THERMOPSIS VELUTINA** Greene.

T. californica var. velutina Greene, Erythea 1:81.

A 1:35 fdr.

**THEROPON** Raf. A 1:326d.

**T. ELATUM** Greene. Ab 189. A 1:326d.

**T. INTERMEDIUM** M 1:53.

**T. ROTUNDIFOLIUM** Wheelock. Ab 189. A 1:326d.

**TELASTI** Tourn, L, Gen ed 1, 193 (1737).

**T. ALPESTRE** L, sp pl, ed 2, 903. B 1:45. 2:432. Eu.

**T. COCHLEARIFORME** B 1:45 as

**T. FENDLERI** G, Pl Wright 2:14. B 1:45 as

**T. MONTANUM** L, sp pl 647. Eu. (Hook Fl 1:58 et T & G Fl 1:114. = alpestre fide B 1:45.)

**THUIDIUM** Schimper.

**T. BLANDOWII** Bruch & Schimp. B 2:411 as Hypnum B.

**T. LEUCONEURUM** Lesq. B 2:411 as Hypnum l.

#### Genus THUYA Tournesfort.

L, syst ed 1 (1735).

**T. CRAIGIANA** A Murr, Oreg Exp 2 t 5. B 2:116 as Libocedrus decurrens.

**THUYA GIGANTEA** Nutt.

Phil ac J 7:52 (1834). B 2:115.

**T. EXSELE** Bong. M 4:7 fdr.

**T. MENZIESII** Dougl ex Endl Syn Conif 52. B 2:115 as gigantea.

**T. OCCIDENTALIS** L, sp pl 1002. B 2:115.

**T. PLICATA** Lamb, Pin ed 800, 127 n 61 (part = gigantea fide IK.)

**THYMUS** Tourn ex L, syst ed 1 (1735).

**T. CHAMISSONIS** Bth in Linnaea 6:80 (1831). = Micromeria Douglasii fide. B 1:595.



**T. DOUGLASHII** Bth lc. = *Micromeria* D fide. B 1:595.

**THYSANOCARPUS** Hook, Fl 1:69 t 18 f A. A 1:115d.

**T. AMPLECTENS** P 3:87.

**T. AFFINES** P 4:311.

**THYSANOCARPUS CONCHULIFERUS**. Greene, T cl b 13:218; Cal ac b 2:390 Cruz; P 1:31. Z 1:132. A 1:20 fdr, 261 fdr.

K. Brandegee, Zoe 1:132.

Variety **PLANIUSCULUS** Rob. A 1:261 fdr.

**T. CRENATUS** Nutt, T & G Fl 1:118. B 1:49 as *laciniatus* variety c.

**T. CURVIFES** Hook Fl 1:69 t 18 f A. Ab 177. A 1:115d. B 1:48.

Variety **ELEGANS** Rob. A 1:115. M 4:65.

Variety **PULCHELLUS** Greene. Da 2, Er 2:179, LA Co. A 1:115.

**T. ELEGANS** F & M Ind sem Hort Petrop 2:51. B 1:48 as *curvipes*.

**T. EMARGINATUS** P 3:86.

**T. ERECTUS** Wat 11:124. B 1:49 Guad.

**T. FILIFES** P 4:200.

**T. FILIFELUS** P 3:86.

**T. LACINIATUS** Nutt, T & G Fl 1:118. B 1:49. Da 2. Ab 177. Br 1:225 (cites *ramosus* as a synonym). A 1:115d.

Variety **CRENATUS** Brewer, B 1:49. A 1:115.

**T. OBLONGIFOLIUS** Nutt, T & G Fl 1:119. Greene, Cal ac b 1:73 as *athysanus pusillus* (T. *pusillus* fide B 1:49).

A 1:117s.

**T. PULCHELLUS** F & M, lc. B 1:48 as *curvipes*.

**THYSANOCARPUS PUSILLUS** Hooker. Ic Pl t 42. Da 2. B 1:49. 2:432. A 1:117. H & A, bot Beech 324. Wat, bot king 31. T & G Fl 1:119.

See *Athysanus pusillus* Greene.

**T. RADIANUS** Bth 297. B 1:49.

**THYSANOCARPUS RAMOSUS**.

Greene, Cal ac b 2:390 (28 My 1887):—"Wholly glab and slightly glauc, a ft h, the st parted near the base into many erect, leafy and at length racemose branches; lvs 2-4' lg. linear, those of the branches entire, or with a few scattered sm but salient teeth, and an auriculate-clasping base, the lower and radical with 2-3 pairs of linear divaricate lobes; raceme naked, the pedicels slender and recurved; sep minute, cymbiform, erect-spreading in fl, w, with a broad g mid-vein; pet twice the length of the sep, spatulate-oblg, retuse; sta 6, all of the same length, 3 on each side of the broad flat pist; samara regularly and rather strongly concavo-convex, the crenate margin with or without some oblg perforations; sty short, persistent. Species just intermediate between its very singular island congener and the mainland T. *crenatus*; having the foliage and branching habit of the former, nearly." Cruz.

See *Thysanocarpus laciniatus* Nuttall.

**THYSANOTHEMA** Neck.

**T. HYBRIDUM** Glfts 1:158 based on *Tussilago hybrida* L.

**TIABELLA** L. Diss Chen 29 (1751).

**T. MENZIESII** Pursh, Fl 1:313. B 1:197 as *Tolmiea* M.

**T. STREFOFETALA** Presl. B 1:199 as

*trifoliata* L.

**T. TRIFOLIATA** L. B 1:199. Asia; Alk; Ore.

**T. UNIFOLIATA** Hook, Fl 1:238 t 81. B 1:199.

**TIBOUCHINIA** Aubl Pl Gul 1:445 t 177 (1775).

**T. BRITTONIANA** Cogniaux, T cl b 11:—, Z 1:63, SA.

**TILLAEA** Michx ex L, syst ed 1 (1735). A 1:327d.

**TILLAEA ANGUSTIFOLIA** Nuttall.

T & G Fl 1:558. B 1:209. Br, Z 1:113 Cat. A 1:48.

See *Tillaeastrum aquaticum*.

**T. AQUATICA** L. A 1:48 as *Tillaeastrum* a.

**T. GOLANDERI** Greene. A 1:49 as *Tillaeastrum aquaticum*.

**T. ERECTA** H & A. M 3:99 cites *minima* Miers as a synonym.

**T. LEPTOPETALA** Bth 310. B 1:208 et A 1:327 as *minima* variety subsimplex.

**T. MINIMA** Miers, Chil 2:530. Ab 188. B 1:208. Da 6. Greene, Cal ac b 1:210 Cruz. Br 1:210 Rosa. A 1:327d. M 3:99 as *erecta*.

Variety **SUBSIMPLEX** Wat 1:208. A 1:327d.

**T. FEDUNCULARIS** Sm in Rees Cycl 35; n 4. Brazil. B 2:446 Sber. Gay, Fl Chil 2:531. DC Prodr 3:382.

**T. SIMPLEX** Nutt, Phil ac J 1:114. A 1:49 as *Tillaeastrum aquaticum*.

Genus **TILLAEA** Britton.

**TILLAEA** BRITTON AQUATICUM.

Britton, NY bot gard b 3:1, based on *Tillaea aquatica* L, Sp Pl 128 (1753)

A 1:48d.

**TIEMIA** J. F. Gmel, Syst 524, 538 (1791). = *Cyrtanthus*.

**TIEMIA** Hedw. Moss.

**T. MEGAPOLITANA** Hedw. B 2:399.

**TISSA** Adans, Fam 2:507. A 1:157d. = *Spergularia* fide IK.

**T. GRACILIS** Britton. Ab 149. A 1:163.

**T. LEUCANTHA** P 1:301.

**T. LUTEOLA** P 5:114.

**T. MACROTHECA** Britton. Ab 149. Da 3. M 3:74. A 1:157d, 163.

**T. MARINA** Britton. Ab 148. A 1:158d, 163.

**T. MEDIUM** Da 3.

**TISSA TALLINUM** Greene.

"Per and apparently suffrutescent; the erect branches almost without internodes and densely clothed with linear or linear-filiform lvs 1-2½' lg, these from glab to sparsely glandular-hispidulous under a lens; the triangular-lanceolate long-attenuate stipules ½-¾' lg; infd a rather dense sh peduncled cyme; cap nearly cylindrical, 3 or 4" lg, little exceeding the narly linear-oblg hispidulous sep; sds minute, broad-pyriform smooth, wingless."—Greene, Er 1:106. Guad.

**T. TENNIS** Greene. Ab 149. A 1:158d.

**T. VALIDA** Greene. A 1:158 fdr.

**T. VITIFOLIA** Britton.

**TICULIA** Pers Syn 1:157 (1805). = *Coldenia* fide IK.

**T. BREVIIFOLIA** Nutt, ex T, bot Mex bound 136. B 1:520 as *Coldenia* Nuttallii.

Variety **PLICATA** T, lc. B 1:520 as *Coldenia* Palmeri.

**TMESIPTERIS**

**T. FORSTERI** Endlicher. Australia. B 2:349.

**TITHEMALUS** Tourn ex Hall, Enum Stirp Helv 1:189 (1742). = *Euphorbia fide IK*.

**T. PHILOBUS** Ckl., M 4:56 based on *E. montana* E (not Raf).

**T. CRENULATUS** M 1:55.

**T. DICTYOSPERMUS** M 1:56.

**T. FRANCISCANUS** M 1:56.

**TOLFIELDIA** Huds, Fl Angl ed 2, 157 (1778).

**T. GLUTINOSA** Pers syn 1:399. B 2:184, 484. P 3:81.

**T. OCCIDENTALIS** Wat 14:283. B 2:184.

**TOLMIEA** T & G Fl 1:582 (1840).

**T. MENZIESII** T & G, Fl 1:582. B 1:197.

**TONELLA** Nutt, ex G 7:378 (1863).

**T. COLLINSIOIDES** Nutt, G 7:378; 11:92; B 1:555. P 1:55 as *Collinsia tenella*. M 1:5 as *Tonella tenella*.

**T. FLOEBUNDA** G, B 1:556. P 1:55 as *Collinsia f.*

**T. TENELLA** M 1:5, based on *Collinsia tenella* Bth, DC Prodr 10:593 (1846).

#### \* Genus **TORREYA** Arnott.

Ann nat hist sr 1, 1:130 (1838).

**TORREYA CALIFORNICA** Torr.

NY J Pharm 3:49 (1852). B 2:110.

See *Tumion Californicum*.

**T. MYRISTICA** Hook, bot mag t 4780. B 2:110 as *Californica*.

**TORTULA** = *Barbula*.

**T. CRASSINERVIA** De not, Musc Ital 1:23 t 6. B 2:369 as B: *chloronotis*.

**T. CUNEIFOLIA** Smith, Engel, bot t 1510. B 2:369 as B: c.

**T. INERMIS** Mont; De not, musc Ital. 1:44 t 20. B 2:372 as B: i.

**T. LAEVIFILIA** Schwaeger, suppl t 120. B 2:373 as B: l.

**T. LATIFOLIA** Wilson, Bryol Brit t 43. B 2:373 as B: l.

**T. MARGINATA** Wilson, Bryol Brit 131 t 43. B 2:370 as B: m.

**T. MEMBRANIFOLIA** Hook, Musc Exot 1: t 26. B 2:369 as B: m.

**T. MUELLERI** Wilson, lc, t 44. B 2: 373 as B: m.

**T. PRINCEPS** De not Musc Ital 1:33 t 13. B 2:373 as B: *Muelleri*.

**T. RIGIDA** Wilson, Bryol Brit t 32. B 2:368 as B: r.

**T. RURALIS** Hedw. B 2:373 as B: r.

**T. SUBULATA** Hedw, sp Musc t 37; Eng bot t 1101. B 2:372 as B: s.

**TOVARIA** Neck, Elem 3:190 (1790). = *Smilacina fide IK*.

**T. EACEMOSA** Baker, J Linn sc 14:570. B 2:161 as in part *S. amplexicaulis*.

**T. SESSILIFOLIA** Baker, lc, 566. B 2:161 as S: s.

**T. STELLATA** Necker, Baker lc, 565. B 2:162 as S: s.

**TOWNSENDIA** Hook, Fl 2:16 t 119 (1833).

**T. BAKERI** P 4:157.

**T. FLORIFER** G 16:84. B 2:455.

**T. SCAPIGERA** Eaton, bot king 145 t 17. B 2:455.

**T. STRIGOSA** Nutt, Am phil sc tr, ns, 7:306. B 2:455.

**T. LEPOTES** Osterh, M 4:69 based on *sericea* var: l. Colo.

**T. WRIGHTII** G, bot Mex bound 78. P 3:47. = *Aster W* (fide IK).

**TOXICODENDRON** L. = *Rhus L.*

**TOXICODENDRON** Tourn. Glfts 1:114.

Type T: *vulgare*.

**T: ABORIGINUM** Glfts 1:125. Choctaw agency.

**T: ARIZONICUM** Glfts 1:123. Ar.

**T: BITERNATUM** Glfts 1:124. Tex.

**T: BLODGETTII** Glfts 1:126 based on *Rhus B* (Kearney, T cl b 21:486).

**T: COMAROPHYLLUM** Glfts 1:120.

"Sts upright, lfy branches light brown, obscurely puberulent, well marked with sm elliptic lenticels: lfts obovate-deltoid, the terminal 1 or 2' lg and petiolulate, the laterals half as large, sessile, all entire except around and across the nearly truncate apex which is almost as broad as lfts' length, here crenate-toothed, the upper face dark g, lower pale, both glab; fr in loose pendulous clusters both notably compressed and elongated, being round-oval, but obtuse, the epicarp very thin and fragile, delicately puberulent: putamen strongly striate."—Glfts 1:120. "From Tighe's, near S. D." (near Julian, S. D. Co).

**T: COMPACTUM** Glfts 1:126. Vt.

**T: CORIACEUM** Glfts 1:120. Wash.

"Branches only sparsely lfy, elongated and curved, the shrub, perhaps, reclining or trailing but not rt'g, bark g'ish-gray, minutely hirtellous: lvs elongated and lg-stalked, the whole 6-10' lg; lfts subcoriaceous, entire, deep-g and glab above, beneath with villous midvein but otherwise nearly glab, the terminal ovate, acuminate, 2-4' lg, the pair remote from it, sm'er, very inequilateral: panicles sm, sessile, neither erect nor ascending but spreading divaricately: fr very sm, depressed-globose; epicarp polished, not wrinkled, only faintly striate."—Glfts 1:122. Baja.

**T. DIVERSILOBUM** Greene. M 3:115.

**T: DIVERSILOBUM** Glfts 1:119 based on *Rhus d* (T & G Fl 1:218). Ore; Cal.

**T: DRYOPHEILUM** Glfts 1:121.

"Dendrophilous, climbing trees to the height of 20'; branches puberulent, knotted by salient protuberances under the insertion of lvs: foliage large, 6-8' from base of petiole to apex of terminal lft, lfts 2½-4' lg, oft 3 in width, of oval or ovate outline, coarsely but not deeply crenate-lobed but lobes all abruptly acutish, texture thin even in autumnal maturity, of a deep rich g above paler beneath and with slight pubescence along veins: inf a simple raceme in axil of every lf, never paniced, frs seldom more than 2 or 3 to each raceme, but pedicels slender and drooping: striae of fr indistinct, obscured by a strong very irr wrinkling of whole epicarp."—Glfts 1:121. Little Chico Creek, Butte Co., Cal.

**T: EXIMIUM** Glfts 1:123. Durango, Mex.

**T: GLABRUM** Mill Diet (1768). Glfts 1:116.

**T: GONIOCARPUM** Glfts 1:125. Fla.

**T: HESPERIUM** Glfts 1:118. Ore; Wash; Id.

**T: ISOPHYLLUM** Glfts 1:121.

"Stoutish upright striate sts velvety-puberulent not only the first but also the 2d and 3d seasons: lvs palmately 3-foliate, lfts=in size and all 3 sessile,



1-1½ r lg, of somewhat obovate general contour but pinnately sinuate-lobed, the rounded lobes not deep but in about 3 always opp pairs, dark g above, yet dull and with a glau hue, paler beneath, with very few and scattered appressed hair points on both faces, but between the veins, not along them: fr sm, epicarp not polished but dull and muriculate-punctate as well as somewhat pubescent, the roundish but notably compressed putamen ribbed and striated."—Gifts 1:121. River banks near San Jacinto, Cal.

**T: LAETEVIRENS** Gifts 1:123. Ar.  
**T: LOBADIOIDES** Gifts 1:119. Ore.  
**T: LONGIFES** Gifts 1:118. Ut.  
**T: MACROCARPUM** Gifts 1:117. Kans.  
**T: MONICOLA** Gifts 1:126. Ga.  
**T: NEGUNDO** Gifts 1:117. Kans.  
**T: ORIENTALE** Gifts 1:127. Japan.  
**T: CRYCARPUM** Gifts 1:121.

"Twigs smooth, free from angles and lenticeles, slightly puberulent: lvs thin, very large, the terminal lft 3-4½' lg, oval, coarsely and evenly crenate-lobed, laterals sm'er, inquilateral, entire on nar'er side, on the other lobed like the terminal, deep g and glab above, beneath paler, with a few hirtelous hairs along veins and on margin: inf panicle-ulate but branches of it only 2 or 3 and very sh: fr on slender pedicels and pendulous, notably compressed and of singularly oblique-rhomboid outline, tapering turbinate from above middle to base, upper part more abruptly acute, epicarp not striate but irr sharply and deeply wrinkled, minutely hirtelous-puberulent."—Gifts 1:121. Vicinity of Santa Cruz, Cal.

**T: PHASEOLOIDES** Gifts 1:123. Son.  
**T: PUBESCENS** Mill Diet (1768). Gifts. 1:116. Rhus Toxicodendron L. sppl 266 (not Small, Fl 727 fide Greene).  
**T: PUMILUM** Gifts 1:124. Ar.  
**T: PUNCTATUM** Gifts 1:125. N. M.  
**T: QUEECIFOLIUM** Gifts 1:127 based on Rhus q (Steud, Nom ed 1, 689). Dela. Fla.

**T: RHOMBOIDEUM** Gifts 1:125 based on Rhus r (Small, Fl 727).  
**T: BYDBERGII** Gifts 1:117 based on Rhus R. (small, in Rydl Fl Mont 268, in part). Mont; Wyo; Colo; N. M.  
**T: DIVARICATUM** Gifts 1:122.  
**T: VACCARUM** Gifts 1:122.

"Sts slender, upright, branchlets not striate, obviously knotted by sm infrapetiolar protuberances, densely puberulent: lvs of sm'est, lfts from ¾ to 1' lg, rather deeply and angularly 5-lobed, dark g and glab above, paler and pubescent beneath especially along the veins: inf a simple ascending and rather lg raceme in axil of each lf: stam fls very sm, with sh subquadrate anth on still sh'er fil: fr?"—Gifts 1:122. Cow Creek Mts, Shasta Co., Cal.

**T: VERUCOSUM** Gifts 1:124 based on Rhus v (Scheele, Linnaea 21:592). Tex.  
**T: VULGARE** Mill Diet (1768). Gifts 1:115. Rhus radicans, in part.  
**TRACAULON** Raf, Fl Tell 3:13 (1836). = Polygonum fide IK.  
**T: ARIFOLIUM** Raf, Fl Tell 3:13=P: arifolium fide IK.

**T: MULTANGULARE** Gifts 1:22 based on P: m (H and A comp to bot mag 2:62).

**T: SIBIRICUM** Gifts 1:22 based on P: sagittatum sibiricum Meisn, Asia.

**T: SIEBOLDII** Gifts 1:22 based on P: sagittatum Thunb, Asia.

**T: THUNBERGII** Gifts 1:22 based on P: arifolium Thunb, Asia.

**T: KASTATO-TILOEUM** Gifts 1:22 based on P: h (Meisn.)

**T: STRIGOSUM** Gifts 1:22 based on P: s (R Br).

**T: MEISNERIANUM** Gifts 1:22 based on P: M (Ch and Schl, Linnaea 3:40).

**T: RUBICAULE** Gifts 1:22 based on P: r (Ch, Linnaea 8:130).

**T: STELLIGERUM** Gifts 1:22 based on P: s (Ch, Linnaea 8:131).

**T: MUCICATUM** Gifts 1:22 based on P: m (Meisn. Monogr 74).

**T: PERFOLIATUM** Gifts 1:22 based on P: p (L. sp re ed 2, 521).

**T: PEDUNCULARE** Gifts 1:22 based on P: p (Wall, Cat n 1718).

**T: PRATERMISSUM** Gifts 1:22 based on P: p (Hook f, Brit Ind 5:47).

**T: HILADULUM** Gifts 1:22 based on P: p (Blume, Bijdr 535).

**T: ZETHEGONUM** Gifts 1:22 based on P: t (Blume, Bijdr 535).

**T: MACLEIANUM** Gifts 1:22 based on P: M (Regel, Fl Ussur 127).

**TRAGANTHES** Wallroth (1822). Gifts 1:12 (type: Eupatorium capillifolium).

**T: COMPOSITIFOLIA** Gifts 1:13 based on Eupatorium c (Walt, Carol 199).

**T: EUGENEI** Gifts 1:13 based on Eupatorium E (Small Fl Seus 1165).

**T: LEPTOPHYLLA** Gifts 1:13 based on Eupatorium l (DC 5:176).

**T: PECTINATA** Gifts 1:13 based on Eupatorium p (Small Fl 1165).

**T: PINNATIFIDA** Gifts 1:13 based on Eupatorium p (Ell, sk 2:295).

**T: TENUIFOLIA** Gifts 1:12 based on Eupatorium Capillifolium).

**TRAGOPOGON** L. syst ed 1 (1735).

**T. PORRIFOLIUS** L. sp pl 789. Ab 448.

**TEADESCANTIA**

**T. UNIBERSITATIS** M 3:54, Colo.

**T. REFLEKA** M 3:54.

**T. SCOPULORUM** M 3:54.

**T. TRAUTVETERIA** F & M.

**T. GRANDIS** Nutt, T & G Fl 1:37. B 2: 425. = palmata fide IK. M 3:78, Idaho, Cal.

**T. PALMATA** F & M, Ind Sem 1:22. B 2:425.

Variety **OCCIDENTALIS** G 8:372. B 2: 425 as grandis.

**TRELEASEA**

**T. FUMILA** P 4:225.

**Genus TRIBULUS** Linnaeus.

L. syst ed 1 (1735).

**T. CALIFORNICUS** Wat 11:125. B 1:91.

**T. FISHERI** K 7:162. Cur 1:133 as grandiflorus.

**TRIBULUS GRANDIFLORUS** B. & H. B 1:91, 2:438.

**TRIBULUS MAXIMUS** Linn. L, sp pl 386. B 1:91.

**Genus TRICARDIA** Torrey.

Wat, bot king 258 t 24 (1871).

**TRICARDIA WATSONI** Torr. B 1:515.

**TRICERASTES** Presl, Rel Haenk 2:88 t 64 (1836). = *Datisca*.

**T. GLOMERATA** Presl, lc. B 1:242 as D: g.

**TRICHODIUM** Michx Fl 1:41 t 8 (1803). = *Agrostis* fide IK.

**T. LAXIFLORUM** Bigel ex Mich Fl 1:42 t 8. B 2:274 as A: scabra.

**TRICHOCORONIS** G, Am ac mem, ns, 4:65 (1849).

**T. RIPARIA** Greene, Er 1:42, based on Biolettia r (P 2:216).

**TRICHOPHYLLUM** Nutt, Gen 2:166 (1818). = *Bahia* fide IK.

**T. INTEGRIFOLIUM** Hook Fl 1:316. B 1:381 as B: l.

**T. LANATUM** Nutt. B 1:381 as B: l.

**T. MULTIFLORUM** Nutt, Phil ac J 7: 37. B 1:381 as B: integrifolia.

**TRICHOPTILIUM** G, Mex Bound 97 (1858).

**TRICHOPTILIUM INCISUM** A. Gray. G, Mex bound 97. B 1:395. T, Pac Ry R 5: t 5.

Mohave; CD; Arizona; Baja (Br).

**Genus TRICHOSTEMA Linnaeus.**

Gronov ex L, Hort Cliff 493 (1737). A 1:235d.

**T. ARIZONICUM** G 8:371. Ar. B 1:606.

**TRICHOSTEMA LANATUM** Benth.

Lab G et sp 659. B 1:607. 2:477. Ab 340

Da 14. A 1:236d. Par 322 t.

Davy Erythraea 6:37. Monterey Co.

Variety **LANCEOLATUM** Ab 339.

**TRICHOSTEMA LANCEOLATUM** Bth.

Bentham, Lab 659 (1835).

Coville, CNH 4:176.

Jepson, Erythraea 1:14.

B 1:607. Da 14. Par 321. A 1:236d. Ab

339. M 3:77.

**T. LAXUM** G 7:387. B 1:607. Jepson, Er

1:13.

**T. MICRANTHUM** G, syn fl 2:348. B 2:

477. Ha 114. A 1:362d. SBer Co.

**T. OPILONGUM** Bth, Lab G et sp 659.

B 1:606.

**T. OVATUM** Cur 1:154. A 1:362 fdr.

**TRICHOSTEMA PARISHII** Vasey.

Vasey, bot gaz 6:173. "Romero". Baja!

So Cal.

**TRICHOSTOMUM** Smith.

**T. ANOMALUM** Schimp. B 2:367. SF.

**T. COLORADENSE** Austin, bot gaz 2:90.

Yosemite. B 2:367.

**T. CORNICULATUM** Schwaegr, suppl 2:

75 t 118. B 2:367 as anomalum.

**T. CRASSINERVE** Hampe, Linnaea 30:

456. B 2:367 as flexipes.

**T. CRISPULUM** Bruch, Regensb Fl 12:

t 4. B 2:367.

**T. FLEXICAULE** Bruch & Schimp.

Bryol Eu t 18a. B 2:366 as Leptatrichum

f.

**T. FLEXIPES** Bruch & Schimp, Bryol

Eu t 171. B 2:367. SF. Eu.

**T. HETEROSTICHUM** Hedw. Muse

Frond 2: t 25. B 2:381 as Rhacomitrium

h.

**T. LANUGINOSUM** Hedw, lc 3: t 2. B 2:

381 as Rhacomitrium l.

**T. RIGIDULUM** Smith. B 2:371 as Bar-

bula rigida.

**T. TOPHACEUM** Bridel. Eu. Cal. B 2:

367.

**TRICUSPIS** Beauv. Agrost 77 t 15 f 10

(1812).

**T. PULCHELLA** T, Pac Ry R 14:156.

B 2:301. = *Tridodia* p fide IK.

**TRIENTALIS** Rupp ex L, syst ed 1 (1735).

**T. AMERICANA** Pursh, Fl 1:252. B 1:

468.

**T. ARCTICA** Fisch ex Hook Fl 2:121. B

1:469 as Europaea var: a.

**T. EUROPAEA** L, sp pl 344. Eu. Par

208.

Variety **LATIFOLIA** T. B 1:469.

**T. LATIFOLIA** Hook Fl 2:121. B 1:469

as Europaea var: l.

**Genus TRIFOLIUM Linnaeus.**

**TRIFOLIUM AMPLECTENS** T. & G.

Brandegee, Zoe 1:113. Cat.

Cruz; Guad; Sonoma Co to Chill.

**TRIFOLIUM BIFIDUM** A. Gray.

Abrams, Fl LA 212. Morgans station

(Davidson).

Brewer & Watson, Bot Cal 1:129. Ore-

gon.

Davidson, Pl LA Co 4.

**TRIFOLIUM CATALINAE** S. Watson.

**TRIFOLIUM CILIATUM** Nutt.

**TRIFOLIUM CILIOLATUM** Bth.

Abrams, Fl LA 212.—Common on

grassy hillsides and in the valley.

Columbia river; Cruz (Greene); SBer

hills (Parish 822); SD! Baja!.

Bentham, Pl Hartw 304 (1848).

Davidson, Pl LA Co 4.

**Trifolium ciliatum** Nuttall, Pl Gamb

152 (1848), not Clark.

Brewer & Watson, bot Cal 1:129. LA

to the Columbia.

See *T. ciliolatum*.

**TRIFOLIUM DECODON** Greene.

**TRIFOLIUM DEPAUPERATUM** Des-

vaux.

Abrams, Fl LA 215.

Davidson, Pl LA Co 4.

**TRIFOLIUM EXILE** Greene.

**TRIFOLIUM FLAVULUM** Greene.

**TRIFOLIUM FRANCISCANUM** Greene.

"Slender but wiry, the decumbent

branches 5-10' lg: lfts linear-cuneiform,

the very lowest entire, truncate and

cuspidate, the others serrulate and acute;

filiform peduncles far exceeding the lvs:

inv-seg oblg, obtuse; hds sm, hemis-

spherical or subglobose: ex-teeth sh and

subulate: cor r-p, in age inflated to the

broadly ovate. Type com at S F."—

Greene, Man 100.

Variety **TRUNCATUM** Greene, Man 100.

"Larger and more flaccid, lfts ampler,

nearly all linear and oblg-linear, trun-

cate and scarcely toothed; hds larger:

cor ochroleucous, the keel tipped with

dark p, the whole in age inflated almost

to the turbinate or obpyramidal. Abund-

ant in Napa and Solano counties, etc."

—Man. 100.

**TRIFOLIUM FUCATUM** Lindl.

**TRIFOLIUM GAMBELII** Nuttall.

Mt. Diablo, and So. Cal. (Greene pltt 2:

224).

**TRIFOLIUM GRACILENTUM** T. & G.

*Trifolium denudatum* Nutt; J ac Phila,

II. 1:152. t 24 (1848).

Variety **INCONSPICUUM** Fernald.

**TRIFOLIUM INVOLUCRATUM** Willd.

Variety **HETERODON** S. Watson.

SBer (Parish 1151).

**TRIFOLIUM MACRAEI** H. & A.



Brandegee, Zoe 1:113 Cat.  
H & A, bot Misc 3:179 (1833).—Bot Beechey 330.

Type localities: "Baths of Collina, Macrae. Sandy hills, near Valparaiso, Mathews (n 174). Valparaiso, Cuming (n 749)."

Variety **ALBOPURPUREUM** Greene.

Abrams, Fl LA 213.

Davidson, Pl LA Co 4.

Trifolium albopurpureum T & G, Fl 1:313 (1838).

**TRIFOLIUM MICROCEPHALUM** Pursh  
Puget Sound; Cat; Cruz; Guad; Baja;  
SD! SBer; San Clemente Island.

Pursh, Fl 2:478 (1814).

Type locality: "on the banks of Clark's river."

Per, ascending, pubescent; lvs obovate, dentate; hds sm, few-fld; fls sessile, exceedingly sm, pale p.

Coville, CNH 4:33, 274.

Abrams, Fl LA 214.

Hall, U 91.

**TRIFOLIUM MICRODON** H. & A.

Hooker & Arnot, Bot Beech 330 t 79.

Type locality:—"Valparaiso, Cuming "n 747)."

Torrey & Gray, Fl 1:691.

Variety **FILOSUM** Eastwood.

**TRIFOLIUM MINUTIFLORUM** Greene.

—Greene, Pittonia 3:215 (1897).

**TRIFOLIUM MONANTHUM** A. Gray.

Trifolium pauciflorum (?) var parvum Kellogg Cal ac pr 5:54 (1873).

Trifolium multicaule Jones, Torr, cl b 9:31 (1882).

**T. NEUROPHYLLUM** Gifts 1:154 N. M.

**TRIFOLIUM OBTUSIFLORUM** Hooker.

Type locality: "near Monterey, Cal."

Trifolium roscidum Greene, Fl Fran 31 (1891).

Davidson, Pl LA Co 4.

**TRIFOLIUM PALMERI** S. Wats.

Brandegee, Zoe 1:113, Cat.

San Clemente Island.

**TRIFOLIUM PAUCIFLORUM** Nuttall.

Wash; Mont; Ut; SBer hills (Parish 749); SD!

T & G, Fl 1:319.

Trifolium variegatum Nuttall.

Trifolium oliganthum Steudel.

**TRIFOLIUM PRATENSE** L.

Abrams, Fl LA 213.

L. Sp Pl 768 (1753).

Type locality:—"Europae graminosis."

**TRIFOLIUM PROCUMBENS** L.

Parish, Erythea 3:60.—"well established along the banks of a stream in Potomac canyon, alt 3000", in the SBer mts."

**TRIFOLIUM REPENS** Linn.

L. Sp Pl 767 (1753).

Type locality:—"Europae pascuis."

Abrams, Fl LA 212.

Davidson, Erythea 1:59, Pl LA Co 4.

**TRIFOLIUM RUSBYI** Greene.

Pittonia 1:5 (1887).

Hall, U 92.

Variety **ATORUBENS** Greene.

Greene, Erythea, 4:66 (1896).

**TRIFOLIUM SPINULOSUM** Douglas.

Gabriel; SBer mts.

Abrams, Fl LA 213.

Douglas, Hook, Fl Bor Am 1:133

(1834).

Type locality:—"Very common near springs, in the vallies between Spokane

and Kettle Falls, Wash."

**TRIFOLIUM STENOPHYLLUM** Nutt.

Abrams, Fl LA 215.

Davidson, Pl LA Co 4.

**TRIFOLIUM TRIDENTATUM** Lindl.

Abrams, Fl LA 214.

Lindl, bot Reg t 1070 (1827).

Variety **MELANANTHUM** S. Watson.

"Arizona; So to middle Cal."

Variety **OBTUSIFLORUM** S. Watson.

SBer hills (Parish 751); SD! to middle Cal.

**TRIFOLIUM VARIEGATUM** Nutt.

See T. pauciflorum Nuttall.

**TRIFOLIUM WORMSKJOLDII** Lehm.

T. involucreatum Wild of Bot Cal in part.

Abrams, Fl LA 213.

Hall, U 92.

Genus **TRIGLOCHIN** Linnaeus.

**TRIGLOCHIN MARITIMUM** Linn.

Genus **TRILLIUM** Linnaeus.

**TRILLIUM CALIFORNICUM** Kellogg.

**TRILLIUM OVATUM** Pursh.

**TRILLIUM PETIOLATUM** Pursh.

**TRILLIUM SESSILE** Linn.

**TRIODIA PULCHELLA** Torrey.

Tricuspis pulchella Torrey.

**TRISETUM CALIFORNICUM** Vasey.

**TRISETUM ELONGATUM** Kth.

Texas; Baja (Or 143, 1437).

**TRISETUM SPICATUM** Rich.

Genus **TRITELEIA** Douglas.

Scapes slender from a fibrous coated corm, with few thin linear lvs and bearing an umbel of y, w, blue or p fls: perianth tube rather sh or funnelform, not inflated, angular or caccate; the seg erect or spreading: sta 6 unappendaged, all antheriferous; anth versatile or basifixed: ova on a slender stipe.

**T. GRANDIFLORA** Lindl, bot reg sub t 1293. B 2:154 as Brodiaea Douglasii.

**T. HENDERSONI** P 1:164 based on Brodiaea H.

Type locality: Glendale, Ore.

**T. LAZA** Bth, Hort sc tr 1:413 t 15. A 1:183d. Lindl, bot reg t 1685. B 2:155 as Brodiaea L. M 3:80.

**T. PALMERI** P 1:292 based on Brodiaea P.

**T. PEDUNCULARIS** Lindl, bot reg sub t 1685. B 2:155 as Brodiaea p.

Genus **TRITICUM** Linnaeus.

**TRITICUM** L. syst ed 1 (1735).

**T. AEGIOPOIDES** Turcz. B 2:324 S. Parry. Pl Wyo 16.

**T. CANINUM** L. sp pl 86. B 2:324.

**T. REPENS** L. sp pl 86. Br, Colo 227. 246. Da 19. B 2:323.

**T. STRIGOSUM** Spreng, syst 1:326. B 2:324.

**T. VIOLACEUM** Horn, Fl Dan t 2044. B 2:324.

**TRIXIS** P Br. Hist Jamaica 312 (1756).

**TRIXIS ANGUSTIFOLIA** D. C. DC 7:69. P 1:205 Cedros; 265, San Benito Isl.

Texas to Cal.; throughout Baja.

Variety **LATIUSCULA** A. Gray.

CD: SD foothills; Texas.

**T. CALIFORNICA** K 2:182. Cur 1:141 as angustifolia.

**T. SUPFRUTICOSA** Wat, B 2:459.

**TROPAEOLUM** L, Gen, ed 1, 114 (1737).  
**T. MAJUS** L, sp pl 345. B 1:93. Howe, Br 1:19.  
**TROPIDOCARPUM** Hook. A 1:114d.  
**T. CAPPALEDEUM** P 1:217, Contra Costa Co, Cal.  
**TROPIDOCARPUM DUBIUM** Davidson. Ab 174. A 1:5 fdr.  
**T. GRACILE** Hook, Ic Pl t 43. Ab 173. B 1:44, 2:432. Da 2. A 1:114d.  
**T. SCABRIUSCULUM** Hook, Ic, t 52. B 1:44 as gracile.

#### Genus **TROXIMON** Nuttall.

Fraser Cat 1813, nn 83, 84. Pursh, Fl 2: 505, 742 (1814).  
**T. APARGIOIDES** G, B 1:438.  
**T. ARIZONICUM** P 2:78, mts of Ar and NM.  
**T. AURANTIACUM** Hook, Fl 1:300 t 104. B 1:437, Cockerell W 6:11. P 2:76 Colo.  
**T. ELATUM** P 1:71, "Plains of the lower Sacramento, Cal."  
**T. CHILENSE** G 9:216. = heterophyllum. B 1:439.  
**T. GLAUCUM** Nutt, Fraser Cat 1813. P 2:77 Colo. B 1:437.  
**TROXIMON GRANDIFLORUM** A. Gray. G 9:216. Par 169. P 1:91 Mig. Br 1:214 Rosa. B 1:438.  
 Washington; CD; Rosa.  
**TROXIMON HETEROPHYLLUM** Griseb. Greene, T cl b 10:88; Cal ac b 2:406 Cruz. Ha 131.

British Columbia; Utah; Cruz; Guad. Synonymy: *Macrorhynchus heterophyllus* Nutt.—*Agoseris heterophylla* P 2:178.

**T. MARSHALLII** P 1:174. Humboldt Co.  
**T. NUTTALLII** G 9:216. B 1:438.  
**T. PARVIFLORUM** Nutt. Am phil sc tr 7:434. P 2:78 Wyo. B 1:437s.  
**T. PLEBEIUM** P 2:79.  
**T. FUMULUM** Nutt. B 1:437 as aurantiacum, "a small form."  
**T. FUMULUM** P 2:76 based on *Macrorhynchus purpureus* G. (T. aurantiacum purpureum G). Colo; NM.  
**TROXIMON RETRORSUM** A. Gray. G 9:216. Ha 131. B 1:438. (*Agoseris retrorsa* P 2:178.)

Mendocino Co to SBER mts.  
**T. TAXACIFOLIUM** Nutt. B 1:437 as glaucum var: t.

#### Genus **TSUGA** Carriere.

**T. CANADENSIS** Carr, Conif ed 1, 188. B 2:121.  
**T. DOUGLASSII** Carr, Conif, ed 1, 192. B 2:120 as *Pseudotsuga* D.  
**TSUGA MERTENSIANA** Carr. Carr, Conif ed 2, 250. B 2:120. P 3:68.  
**T. PATTONIANA** E. Gard Chron 1879 (2): 756. B 2:121, 483. P 3:68.  
**TUCKERMANNIA** Nutt, Am phil sc tr, ns, 7:363 (1841). = *Leptosyne* fide IK.  
**T. MARITIMA** Nutt lc. B 1:356 as L: m.  
**TUMION** Raf. = *Torreya* Arn.  
**TUMION CALIFORNICUM** Greene.  
*Torreya Californica* Torrey.  
 California Nutmeg.

False nutmeg. Singular trees of four species, found in Japan, China, Florida, and California respectively. Foliage of a heavy, disagreeable odor; fr resembling the nutmeg of commerce in both exterior and interior appearance, but having none of its qualities. Sd large, solitary.

#### **TUOMEYA**

**T. FLUVIATILIS** Harv. Z 1:91.  
**TURBITIS** Tourn ex L, syst ed 1 (1735). = *Arabis* fide IK.  
**T. GLABRA** L, sp pl 666. A 1:112 s.  
**T. LASIOPHYLLA** H & A, bot Beech 321. A 1:114s. B 1:41s.  
**T. MACROCARPA** Nutt, T & G Fl 1:78. A 1:112s.  
**TUSSILAGO** L, syst ed 1 (1735).  
**T. PALMATA** Ait. B 1:407s.

#### Genus **TYPHA** Tournefort.

**TYPHA ANGUSTIFOLIA** Linn.

Ab 8. Da 17. B 2:189.

#### **TYPHA BEACTEATA**

Greene, Cal ac b 2:413 (28 My 1887): "Rather slender, 15-18 ft hl, the staminate and pistillate spike each 12-16 i long, separated by an interval of 1 i or more, aggregate length of spike in the largest specimens fully 3 ft, the staminate at flowering time subtended and partly embraced by a linear deciduous bract of its own length, and bearing 3-7 smaller somewhat scarious caducous ones above midway or near the apex: pollen simple. In a marshy place near the sea on the south side of Santa Cruz Island, above the mouth of Laguna canyon. A gigantic sp, were not out of fl \* 13 Ag \* the mature spike would be 1 i at least in thickness." Z 1:146s.

**TYPHA LATIFOLIA** Linn.

Da 17. Ab 8. B 2:188.

**TYRIA** Klotzsch. = *Bernardia*.

**T. MYRICAEPOLIA** Scheele. B 2:70s.  
**TUMIONELLA** Gifts 1:173, with *Aplopappus monactis* as type.

**T: MONACTIS** Gifts 1:173.

**UDORA** Nutt Gen 2:242 (1818). = *Elodea*.

**U. CANADENSIS** Nutt, Gen 2:242. B 2: 129s.

**ULOTA** Mohr.

**U. CRISPULA** Bruch. B 2:382.

**U. PHYLLANTHA** Bridel. B 2:382.

#### Genus **UMBELLALARIA** Nuttall.

A 1:222d.

Trees with thick evergreen petioled lvs and perfect fls, borne in terminal or **UMBELLULARIA CALIFORNICA** Nutt. Da 15. B 2:61. Ab 158. Par 378. A 1:223d. M 3:34.

Cal Laurel. SBER Co to Oregon.

**UNAMIA** Gifts 1:6 (type: *Aster ptarmicoides*).

**U: PTARMICOIDES** Gifts 1:6 based on *Aster* p.

**U: FASTIGIATA** Gifts 1:6 fd, Ind.

**U: GEORGIANA** Gifts 1:6 based on *Aster* *Ptarmicoides* var: *Georgianus*.

**U: SUBCINEREA** Gifts 1:7 fd. So Dak.

**UNCASIA** Gifts 1:13 (type: *Eupatorium perfoliatum* L). Based on *Eupatorium* sp.

**U: ALBA** (L, Mont 111) Gifts 1:13.

**U: ALTISSIMA** (L, sp pl 837) Gifts

**U: ANOMALA** (Nash, T cl b 23:106)

Gifts 1:13.

**U: CUNEATA** (E in T and G Fl 2:88)

Gifts 1:13.

**U: CUNEIFOLIA** (Willd sp 3:1753) Gifts

1:13.

**U: GLOMERATA** (DC 5:154) Gifts 1:13.



**U. HYSSOPIFOLIA** (L, sp pl 836.) Gifts 1:13.

**U. LECHEAEFOLIA** (P 3:177) Gifts 1:13.

**U. LEUCOLEPIS** (T & G Fl 2:84) Gifts 1:13.

**U. LINEARIFOLIA** (Walt Carol 199) Gifts 1:13.

**U. MIKANIODES** (Chap Fl 195) Gifts 1:13.

**U. MOHRII** (Greene, CNH 6: 762) Gifts 1:13.

**U. PALLESCENS** (DC 5:154) Gifts 1:13.

**U. PERFOLIATA** (L, sp pl 833). Gifts 1:13.

**U. PETALOIDEA** (Brit. T cl b 24:492) Gifts 1:13.

**U. PUBESCENS** (Muhl in Willd sp 3: 1753) Gifts 1:13.

**U. RESINOSA** (T in DC 5:176) Gifts 1:13.

**U. ROTUNDIFOLIA** (L, sp pl 837) Gifts 1:13.

**U. SALVIA** (Colla) Gifts 1:13.

**U. SCABERRA** (Ell, sk 2:288) Gifts 1:13.

**U. SEMISERRATA** (DC 5:177) Gifts 1:13.

**U. SEROTINA** Gifts 1:13.

**U. SESSILIFOLIA** (L, sp pl 837) Gifts 1:13.

**U. TORREYANA** (Short, suppl 5) Gifts 1:13.

**U. TORTIFOLIA** (Chap, bot gaz 3:5) Gifts 1:13.

**U. TRUNCATA** (Muhl in Willd sp 3: 1751) Gifts 1:13.

**U. VERBENAIFOLIA** (Mich. Fl 2:98) Gifts 1:13.

**UNCINULA**

**U. SPIRALIS** Howe, Er 1:25.

**UNIFOLIUM** Brunsfels. = *Maianthemum*.

**UNIFOLIUM** P 2:31. = *Similacina* Desf.

**U. AMPLEXICAULE** Greene, T cl b 15: 287 = *Similacina racemosa* Desf fide IK.

**U. DILATATUM** Greene, Man 316. = *M. convallaria* fide IK.

**U. LILIACEUM** P 1:280 based on *Smilacina stellata* Wat.

**U. RACEMOSUM** Britton, NY ac tr 8:74. P 2:34.

**U. SESSILIFOLIUM** Greene, T cl b 15: 287. P 1:280. 2:31. 32.

**U. STELLATUM** Greene, T cl b 15:287. P 2:31-33.

**UNIOLA** L. Gen. ed 1. 353 (1737).

**U. MULTIFLORA** Nutt. B 2:306s.

**UNIOLA PALMERI** Vasey.

Along the Colorado river in Sonora, where the Indians gather the grain for food (Palmer).

**U. SPICATA** L, sp pl 71. B 2:306s.

**U. STRICTA** T, NY Lyc ann 1:155. B 2:306s.

**URALEPIS** Nutt, Gen 1:62 (1818). = *Tridolia* fide IK.

**U. COMPOSITA** Buckl, Phil ac pr 1862: 94. B 2:292s.

**U. PULCHELLA** Kunth, Rev Gram 1: 108. B 2:301s.

Genus **URBINIA** Rose.

**URBINIA CORDEROYI** Rose.

Rose NY bot gard b 3:12, based on *Echeveria Corderoyi* E Morren, Belg Hort 24:169 (1874). Northern Mexico.

*Cotyledon corderoyi* Baker, Gard Chron 1:599 (1874).

Purchased in San Luis Potosi, where it

was found on sale as a medicinal plant.—Orcutt.

Genus **UROPAPPUS** Nuttall.

**U. CLEVELANDI** A 1:365.

**U. GRANDIFLORUS** Nutt. B 1:427s. A 1:252s.

**UROPAPPUS LEUCOCARPUS** Greene. A 1:251d.

**UROPAPPUS LINDLEYI** Nuttall.

Ab 445. A 1:251d.

Nutt Am phil soc tr 7:425 (1840).

SF; SD (Or 1053); Baja; Rosa; Cruz.

Calais Lindleyi DC prodr 7:85 (1838);

T-G Fl 2:471 (1843), excl; C. linearifolia.

**UROPAPPUS LINEARIFOLIUS** Nutt.

Nutt Am phil soc tr 7:425 (1841).

Ab 445. B 1:427s. A 1:251d.

Type locality: "In California et circa Fort Vancouver."

Coville, CNH 4:142. Panamint mts.

Throughout Cal.; Baja; Nevada; Arizona; N. M.; Wash; Cruz; Rosa; Guad.

U. grandiflorus Nutt l. c

Calais linearifolia DC prodr 7:85 (1838).

**URTICACEAE** A 1:223d.

Genus **URTICA** Tournefort.

**URTICA** Tourn. A 1:223d.

Simple or branching herbs, with

stinging hairs, and opp 3-7-nerved

petioled serrate or dentate stipulate

lvs; fls clustered in ax geminate racemes or hds; staminate fls 4-merous;

pistillate cx with unequal sep, inner larger, at length enclosing the flattened ak; stlg sessile, tufted. Nettle.

**URTICA BREWERI** S. Watson.

Watson, Am ac pr 10:348 (1875).

Coville, CNH 4:195. Mt Whitney meadows.

Ab 108. Da 16. B 2:64. A 1:224d.

Parish, Zoe 5:112, as not LA.

Type locality: "LA".

**U. CALIFORNICA** P 1:281, San Mateo Co, Cal.

**U. DIOICA** L, sp pl 984. B 2:64s.

**URTICA HOLOSERICA** Nutt.

Gamb 183. Da 16. B 2:64. A 1:223d.

Greene, Cal ac b 2:412 Cruz.

Abrams, Fl LA 107, Common in gardens and waste places.

**U. LYALLII** Wat 10:348. B 2:64. P 1:281 in part as ? Californica.

**U. TRACHYCARPA** Wedd, Arch mus Par 9:367. B 2:64s.

**URTICA URENS** Linn.

L, sp pl 984. Greene, Cal ac b 2:412 Cruz. B 2:65. Ab 107. Da 16. Z 1:125. A 1:223d.

**USTERIA** Willd, in Roem & Usteri, Mag 1790: 151.

**U. ANTIHEMINIFLORA** Poir. B 1:551 as *Antorhinum maurandoides*.

**UTRICULARIA** L syst ed 1 (1735).

**U. INTERMEDIA** Hayne, Schrad J 1800 (1): 18. Eu. B 2:476.

**U. MINOR** L, sp pl 18. Eu. B 1:586. (Pursh Fl 1:15 = gibba fide IK).

**U. VULGARIS** L, sp pl 18. Eu. Parry, Pl Wyo 18. B 1:586. K Br, Z 1:83, Marin Co, Cal.

**UVULARIA** L. Gen ed 1, 93 (1737).

**U. SMITHII** Hook Fl 2:174 t 189. B 2: 178s. = *Disporum Menziesii* fide IK.

**VACCINIUM** L, syst ed 1 (1735).  
**V. ALBUM** Pursh. P 3:324 as ? Polycod-  
 dum elevatum.  
**V. ARBOREUM** Marshall, Arb 157  
 (1785). P 3:325 as Batodendron a. NC;  
 ill.  
**V. ARBUSCULA** P 3:73, Alk; 81.  
**V. CAESIUM** P 3:249, 325 as Polycod-  
 dum c. Fla.  
**V. CAESPITOSUM** Michx Fl 1:234. B 1:  
 450. 2:460.  
**V. ELEVATUM** Banks & Soland, DC  
 Prodr 7:567 (1838). P 3:324 as Polycod-  
 dum elevatum.  
**V. LANCEOLATUM** DC, ex Dun, in  
 Prodr 7:570. B 1:451 as ovatum.  
**V. MACROCARPON** Ait, Hort Kew, ed  
 1, 2:13. B 1:450.  
**V. MYRTILLOIDES** Michx, Fl 1:234.  
 Parry, Pl Wyo 13. = pennsylvanicum  
 fide IK.  
**V. MYRTILLUS** L, sp pl 349. B 1:451.  
**V. OBLONGUM** P 3:250, 325 as Polycod-  
 dum o. Tenn.  
**V. OCCIDENTALE** G, B 1:450.  
**V. OVALIFOLIUM** Sm, in Rees Cyc 36:  
 n 2. B 1:451. P 3:73.  
**V. OCATUM** Purch, Fl 1:290. B 1:451.  
 Greene, Cal ac b 2:406 Cruz. Par 206 t.  
**V. OXYCOCCUS** L, sp pl 351. B 1:450. P  
 3:81 Alk.  
**V. PARVIFOLIUM** Sm, in Rees Cyc 36:  
 in 3. B 1:450. P 3:73, Alk.  
**V. REVOLUTUM** P 3:250, 325 as Polycod-  
 dum r. Fla.  
**V. STAMINEUM** L sp pl 390 (1753). P  
 3:324 as Polycodium S.  
**V. VITIS-IDAEA** P 3:81 Alk.  
**V. ULIGINOSUM** L, sp pl 350. B 1:451.  
 B 1:451.  
**VAGNERA** Adans. = Smilacina.  
**V. AMPLEXICAULIS** Greene, Man 316.  
**V. AMPLEXICAULIS** Greene, M 3:81.  
**V. SESSILIFOLIA** Greene, Man 316.  
**V. SESSILIFOLIA** Greene, M 3:80.  
**VALERIANA** Tourn ex L, syst ed 1  
 (1735).  
**V. CALIFORNICA** M 1:60.  
**V. CAPITATA** Pall in herb willd. M 4:  
 83.  
**V. EDULIS** Nutt, T & Fl 2:48. B 1:287.  
 M 4:78 Ar.  
**V. SYLVATICA** Banks. B 1:287. Par 111.  
**V. SITCHENSIS** Bong. P 3:84. M 4:82  
 fdr.  
**V. SAMBUCIFOLIA** Mik. M 4:83.  
**VALERIANELLA** Tourn ex Hall, Enum  
 Stirp Helv 666 (1742).  
**V. MACROCERA** G 19:83. Da 8. A 1:  
 179 as Alligera m: 340 as Plecritis  
 Macroera (Ab 382 as P: minor).  
**VANCLEVEA** P 4:51.  
**V. STYLOSA** P 4:51.  
**VANCOUVERIA** C Morr & Decne in Ann  
 sc nat, sr 2, 2:351 (1834).  
**V. CHRYSANTHA** Greene, Cal ac b 1:  
 66. P 2:100 as Van: hexandra variety c.  
 Ore.  
**V. HEXANDRA** C Morr & Decne, lc. B  
 1:15. (Greene, Cal ac b 1:66 = parviflora.)  
 Variety **CHRYSANTHA** P 2:100, reduc-  
 ed from sp.  
**V. PARVIFLORA** P 2:100. Par 90 t.  
**VASEYA** Thurber, Phil ac pr 1863: 79. =  
 Muehlenbergia fide IK.  
**V. COMATA** Thurber, lc. B 2:278. = M:  
 c.

**VEATCHIA** G. Cal ac b 1:4 (1884).  
**V. CEDROSENSIS** G, Cal ac b 1:4. P 1:  
 198, 201. G 20:291. P 1:198, 201.  
**V. DISCOLOR** Br 2:140, based on  
 Schinus ? discolor Bth.  
 Synonymy: *Rhus Veatchii* K.—*Veat-*  
*chia cedrosensis* G.—*Bursera pubescens*  
 Wat 24:44.  
**VEATCHIA** K 2:11 (1863). = *Brodiaea*.  
**V. CRYSTALLINA** K 2:11 Cur 1:148 as  
*Brodiaea lactea*. B 2:156 as same.

#### Genus VELLAEA DC.

A 1:271d. = *Arracacia* fide IK.  
**VELAEA ARGUTA** C & R.  
 Ha 99. Ab 283. Da 7. A 1:271d.  
 Coulter & Rose, Mon 79.  
*Arracacia arguta* B & H, Gen Pl 1:885.  
*Deweya arguta* T. & G.

#### VELAEA PARISHII C-R.

M 4:66. Da 7: A 1:271d.  
 SBer mts (Parish 978 and 1827).  
*Drudeophytum Parishii* C-R, M 82.—  
 Ha U 99.—Abrams, Fl LA 284. Monica,  
 Gabriel mts.  
**VELAEA VESTITA** C. & R.  
 A 1:271 fdr.  
*Arracacia vestita*, Watson, Am ac pr  
 22:415.  
 SBer mts (Parish 598); Tulare Co. (Pal-  
 mer).

*Deweya vestita* Watson Am ac pr 17:373.  
 Genus **VENEGASIA** De Candolle.

**V. CARPESIOIDES** DC 5:43. Ab 427. Da  
 7. B 1:372. Br 1:202 Rosa. Greene, Cal ac  
 b 2:403 Cruz. Par 176. A 1:340d.

#### Genus VERATRUM Tournefort.

**V. ALBUM** Wat, bot king 344. B 2:182  
 as Californicum.  
**VERATRUM CALIFORNICUM** Dur.  
 Durand, Phil ac J 3:103. M 1:121. Par  
 110. SD mts (Parish 457). (B 2:182 =  
 speciosum.)  
**V. ESCHSCHOLTZIANUM** M 1:120.  
**V. FIMBRIATUM** G 7:391. B 2:182. M  
 1:125. Par 111.  
**V. JONESII** M 1:124.  
**V. SPECIOSUM** Rydb, T cl b 27:532,  
 650 (1901). M 1:124. Ha 69.  
**V. TENUIPE TALUM** M 1:39.  
**V. VIRIDE** Ait. B 2:182. Ore.  
**VERBASCUM** Tourn ex L, syst ed 1  
 (1735).

**V. BLATTARIA** L, sp pl 178. Eu. Par  
 194.  
**V. THAPSUS** L, sp pl 177. M 3:61. B 2:  
 472. Par 194.  
**V. VIRGATUM** Stokes in Withering, bot  
 arr Brit Pl ed 2, 1:227. Eu. Jepsen, Er  
 1:13. Parish, Z 1:123. Ab 356. Da 13. B  
 1:548.

#### Genus VERBENA Linnaeus.

**V. BIPINNATIFIDA** Schan in DC 11:  
 553. B 1:609.  
**V. BISERRATA** HBK Nov G et sp 2:  
 275. B 1:608 as polystachya = *Carolina*  
 fide IK.  
**VERBENA BRACTEOSA** Mich.  
 Michx Fl 2:13. B 1:609. Da 13. P 4:152.  
 Ab 337. = *bracteata* fide IK.  
 Similar to *V. prostrata*, but rigid bracts  
 exceeding the smaller fls. Da 13.  
**VERBENA CANESCENS** H. B. K.  
 HBK, Nov G et sp 2:274 t 136. B 1:608.



Mex. Tex. SD Co! Baja!

Cantiles (Palmer); Texas; Mexico.

**V. CAROLINA** L, syst ed 10, 852. B 1: 608.

**V. CAROLINIANA** Michx, Fl 2:14. B 1: 608 (as polystachya as to Spreng in H & A, bot Beech 156, et DC 11:546).

**V. CAROLINIENSIS** Dill, Hort Elth 407 t 301. B 1:608 as polystachya.

**VERBENA CILIATA** Benth.

Bth 21. Mex. B 1:609. 2:478.

Hanson's (Or 496); to Purissima, Baja (Br); to Texas; Mexico.

**V. CONFINIS** P 4:152.

**V. HANSENI** P 3:308.

**V. HASTATA** L, sp pl 20. B 1:609, 2: 478.

**V. INCONSPICUA** P 5:137.

**V. LASIOTACHYS** Link Enum 2:122. B 1:609 as prostrata (as to H & A, bot. Beech 156).

**V. LEUCANTHEMIFOLIA** P 5:135.

**VERBENA LILACINA** Greene.

Cal ac b 1:210. P 1:206 Cedros.

**VERBENA LITTORALIS** H. B. K.

HBK, Nov G et sp 2:276 t 137. P 3:309.

Baja Cal mts (Or 909).

**V. NODIFLORA** L, sp pl 20. P 4:46s. =

Lippia n fide IK.

**VERBENA OFFICINALIS** Linn.

L, sp pl 20. B 1:608, 2:478.

Spikes filiform, bracts minute: leaves pinnatifid.

Europe; naturalized round the world.

**V. PANICULATA** Lam, Encyc 8:548. B

1:609. = hastata fide IK.

**V. PLICATA** P 5:135.

**VERBENA POLYSTACHYA** H. B. K.

HBK Nov G et sp 2:274. B 1:608. Da 13.

A 1:237d. = Carolina fide IK.

Atrams, Fl LA 337. Occasional in

narses.

**VERBENA PROSTRATA** R. Br.

Hort Kew 4:41. B 1:609. Da 13. Greene,

Cal ac b 2:409 Cruz, Ab 337. P 1:92 Mig.

A 1:237d. Jepson, Er 1:12.

**V. PUBENS** P 5:136.

**V. PULCHELLA** P 5:136.

**V. REMOTA** Bth 21. B 1:608 as canes-

cens.

**V. ROBUSTA** P 3:309.

**V. RUBIS** P 4:152.

**V. SORORIA** D Don Prod Fl Nep 104.

B 1:608 as officinalis.

**V. STRICTA** Vent, Jard Cels 53 t 53.

Leeds, W 5:22.

**VERBENA URTICIFOLIA** L.

L, sp pl 20. A 1:237d. B 1:608.

Abrams, Fl LA 337. Occasional in

marshes.

**V. VERONICAEFOLIA** HBK. Nov G et

sp 275. B 1:608 as polystachya (Carolina

fide IK).

#### Genus *VERBENA* Linnaeus.

L, syst ed 1 (1735).

**V. ARISTATA** M 1:8.

**V. DISSECTA** G 20:299 (1885). Parish,

So Cal ac b 2:83; M 3:62. Baja! SBER

mts.

**VERBESINA DISSITA** A. Gray.

Todos Santos bay, Baja!

**V. ENCELIODES** B & H ex G, B 1:350.

Da 9. Z 1:59. Ab 416. A 1:189d.

**V. HASTATA** K 1:140. P 1:204 Cedros.

**V. NUDICAULIS** G 19:12. M 1:8s.

**V. VENOSA** Greene, T cl b 9:110. Cur

1:140 as hastata K.

**VERNONIA** Schreb, Gen 2:541 (1791).

**V. ARKANSANA** DC 7:264 (1838).

Greene, Er 1:4 as crinita.

**V. CRINITA** Raf, New Fl n 932 (1836).

Greene, Er 1:4.

Synonymy: *V. Arkansan* DC (fide

Greene).

**V. GUADALUPENSIS** M 1:28.

**V. OLIGANTHA** P 5:56.

#### Genus *VERONICA* Linnaeus.

**VERONICA ALPINA** Linn.

L, sp pl 11. B 1:572. Par 307.

Variety **WORMSKIOLDII** Hook, bot mag

t 2795. Greenland, Am.

**VERONICA AMERICANA** Schw.

Perennial, racemes in the axils of oppo-

site leaves: cor blue.

Schwein, DC 10:468. B 1:572. P 5:114.

**V. ANAGALLIS** L, sp pl 12. B 1:572.

**VERONICA ARVENSIS** L, sp pl 14.

Parish, SCAB 8:7, LA Co; Riverside.

**V. BUX BAUMI** Tenore, Fl Nap 1:7 t 1.

A 1:232 as Byzantina.

**VERONICA BYZANTINA** BSB.

Abrams, Fl LA 368. LA (Davidson).

Veronica Buxbaumii Tenore.

A 1:232d. M 3:77.

**V. CERNATIFOLIA** P 5:114.

**V. CUSICKII** G, syn fl 2 (1): 288. B 2:

475.

**V. OKYLOBULA** P 5:113.

**VERONICA PEREGRINA** Linn.

L, sp pl 14. B 1:572. Ab 368. A 1:232d.

Hall, U 120. Neckweed.

McClatchie, Brythea 2:124, Pasadena.

San Julian, Baja (Br). SD! Canada

to the Pacific; So Am. Almost cosmo-

politan.

**V. SCUTULATA** L, sp pl 12. B 1:572.

2:475.

**V. SERPYLLIFOLIA** L, sp pl 12. B 1:

572, 2:475.

**V. WORMSKIOLDII** Roem & Schult,

syst 1:101. B 1:572 as alpina var: W.

**VESICARIA** Tourn ex Adans, Fam 2:

420 (1763).

**V. ALPINA** Nutt, T & G Fl 1:102. P

4:309s. Parry, Pl Wyo 4.

**V. DIDYMOCARPA** Hook Fl 1:49. B 1:47

as Physaria d.

**V. FENDLERI** G, Am ac mem, ns, 4:9.

Baja mts (identified by G as a var.)!

NM.

**V. MONTANA** G, Phil ac p 1863:58. B

1:43, 2:432.

**VIBERNUM** L, syst ed 1 (1735).

**V. ELLIPTICUM** Hook, Fl 1:280. B 1:

278.

**V. PAUCIFLORUM** Rafin, Alsog Am 58.

P 3:71. La Pylaie ex T & G, Fl 2:17.

#### Genus *VICIA* Tournefort.

Veatch or tare; ann or per herbs with weak and angular sts, oft slightly climbing: lvs pinnate, with several to many lfts and semi-sagittate stipules, the rachis ending in a simple or branched tendrill: ped axy; fls solitary or racemose: ex 5-toothed, the 3 lower teeth oft longer: banner oblig, or appearing so by the turning back of the edges; wings united to middle of keel: sta more or less diadelphous: sty filiform with a tuft of hairs below stig all around or some-

times only on back: pod flat, 2-valved, 2-several seeded: sds globose. the funiculus expanded above to cover hilum, thus arillate: cotyledons remaining under ground in germination.

**VICIA AMERICANA** Muhl.  
Greene, Cal ac b 2:395 Cruz. Br 1:208  
Rosa, A 1:513d. Da 5. B 1:157. M 4:80 Ar.  
Muhl, Willd sp 3:1096.

Abrams, Fl LA 224. Notes only the 2 varieties as occurring in LA Co.

Davidson, Pl LA Co 5.  
Variety **LINEARIS** S. Watson.  
Ab 325. A 1:313d.

Vicia linearis Greene.  
Variety **TRUNCATA** Brewer.

Ha 92. B 1:158. Ab 325. A 1:313d.  
Sber Co (Parish): LA (Davidson);  
SD Co.

Vicia truncata Nuttall.  
**VICIA CALIFORNICA** Greene.  
A 1:313d.

Abrams, Fl LA 225.—Summit of Mt  
belt of the Cuyamaca mts.  
Greene, Fl Fran 3 (1891).

Type locality: "Calaveras Co." Cal.  
Coville, CNH 4:88. Tehachapi valley  
(No. 1120).

**VICIA EXIGUA** Nutt.  
T & G Fl 1:272. P 1:87 Mig. Ab 325. Da  
5. B 1:158. Greene, Cal ac b 2:395 Cruz.  
A 1:313d.

Variety **CALIFORNICA** T. A 1:74s.  
Variety **HASSEI** Jepson.  
A 1:313s.

Jepson, Fl Midd Cal 296, based on  
Vicia Hassel S. Wats.  
Abrams, Fl LA 225.

Nuttall in T & G Fl 1:272.  
Cruz; San Miguel Island (Greene);  
Cat (Gambel); San Clemente Island.

SD! Baja! LA (Bolander).  
**V. FABA** L. M 3:76. Windsor Bean.  
**V. GIGANTEA** Hook, Fl 1:157. Par 364.  
B 1:157.

**VICIA HASSEI** S. Watson.  
Wat 25:129. A 1:74 fdr, 314. Ab 325. Da  
5. Guad.

**V. HOOKERIANA** Walp Rep 1:715. B  
1:157 as gigantea.

**VICIA LINEARIS** Greene.  
A 1:270s, 314s. Da 5.  
Is Vicia Americana linearis.

**V. MICRANTHA** Nutt, T & G Fl 1:271.  
B 1:158.

**V. NANA** K 7:89. B 2:442 as Lathyrus  
Nevadensis. Cur 1:136 as same.

**V. OREGANA** Nutt, T & G Fl 1:270. B  
1:158 as Americana.

**V. PULCHELLA** HBK, Nov G et sp 6:  
499. B 1:158. M 4:78 Ar.

**VICIA SATIVA** L.  
L, sp pl 736. Eu. B 1:157. Da 5. Ab 325.  
A 1:314d.

Abrams, Fl LA 225.  
Davidson, Pl LA Co 5; Erythra 1:59,  
LA, rare.

**V. SITCHENSIS** Bong, Veg Sitcha 129.  
B 1:157 as gigantea. M 4:46.

**V. SPARSIFOLIA** Nutt, T & G Fl 1:270.  
B 1:158 as Americana.

**VICIA THURBERI** Watson.  
A 1:314d.

**V. TRUNCATA** Nutt, T & G Fl 1:270. B  
1:158s. A 1:313s. = Americana fide IK.  
Variety **VILLOSA** K 1:57. Cur 1:136 as  
Americana variety truncata.

# Genus **VIGUIERA** H. B. K.

Nov Gen et sp 4:224 t 376 (1820).

**V. DELTOIDEA** G 5:161. B 1:354. Z 1:  
272.

**VIGUIERA LACINIATA** A. Gray.  
G, Mex bound 89. B 1:354. A 1:61d.

**V. LANATA** G 17:218. P 1:204 Cedros,  
265 San Benito Island.

**V. NIVEA** B & H, Gen 2:378, in note  
under Encella. B 1:354. = tephrodes  
fide IK.

**VIGUIERA PARISHII** Greene.  
T cl b 9:15. Ar. A 1:61 fdr.

**VIGUIERA TEPHRODES** A. Gray.  
Colorado Desert (Schott).

**V. TOMENTOSA** G 5:161. B 1:354. Z 1:  
272.

**VILFA** Beauv Agrost 16 t 5 f 8 (1812).  
= Sporobolus fide IK.

**V. AIROIDES** Trin, ex Steud Nom ed  
2, 2:766. B 2:269 as S: a.

**V. ASPERIFOLIA** Nees & Meyen, in  
Trin Agros 1:73. B 2:270 as S: a Parry,  
Pl Wyo 16.

**V. CRYPTANDRA** Trin in mem ac  
Petersb sr 6, sci nat 5 (2): 69 (1840).  
B 2:268 as S: c.

**V. DEPAUPERATA** T. Hook Fl 2:257. B  
2:267. = S: d fide IK.

**V. GRACILLIMA** Thurb B 2:268. = S: g  
fide IK.

**V. RAMULOSA** HBK Nov Gen et sp 1:  
137. B 2:269 as S: r.

**V. RIGENS** Trin, Sp Gram 3: t 250. =  
S: r. (Bolander's distribution = Cinna  
macroura fide B 2:276.)

**V. STOLONIFERA** Beauv Agrost 16. B  
2:272 as Agrostis verticillata (= A:  
stolonifera fide IK).

**V. UTILIS** T, Pac Ry R 5:365. B 2:267  
as depauperata.

**VILLARSEA** Vent Choix t 9 (1803) in  
part.

**V. PUMILA** Hook Fl 2:70 t 157. B 1:517  
as Hesperochiron p. (= H: californicus  
fide IK). P 5:50 as Capnorea p.

**VINCA MAJOR**.  
Vaslit, Z 1:86, periwinkle, escape from  
cult in SF bay region.

**VINCETOXICUM** Rupp, Fl Jen ed Hall  
25 (1745).

**V. CYNANCHOIDES** M 1:2 based on  
Gonolobus c (E & G).

**V. FLAVIDULUM** M 1:2 based on Gon-  
olobus f (Chapm).

**V. HASTULATUM** M 1:2 based on Gon-  
olobus h (G).

**V. PARVIFOLIUM** M 1:2 based on Gon-  
olobus p (T).

**V. PUBIFLORUM** M 1:2 based on Gon-  
olobus p (E).

**V. SAGITTIFOLIUM** M 1:3 based on  
Gonolobus S (G).

**V. WRIGHTII** M 1:3 based on Gonolo-  
bus biflorus var: W (G).

**VIOLACEAE** A 1:262d.

# Genus **VIOLA** Linnaeus.

L, syst ed 1 (1735). A 1:262d.

**V. ACHLYDOPHYLLA** P 5:87, 131.

**V. ACHYOPHORA** P 5:33.

**V. ADUNCA** Smith in Rees Cyc 37:  
(1819). B 1:56. A 1:263 as canina var.

**V. AFFINIS** LeConte, NY Lyc ann 2:  
138. P 3:337. = cucullata fide IK.

**V. ALBERTINA** P 4:288.



- V. ALSOPHILA** P 4.  
**V. AMOENA** P 4:7.  
**V. ANDERSONII** P 4:7.  
**V. ANODONTA** P 5:32.  
**V. ARENARIA** P 5:13 as subvestita, as to the pl so-called by some authors (not of DC).  
**V. AIZONICA** P 5:33.  
**V. AEVENSIS** Murr Prod 73. P 4:287. = tricolor fide IK.  
**V. ATRIPPLICIFOLIA** P 3:38.  
**VIOLA AUREA** Kellogg.  
 K 2:185. Cur 1:131. B 1:56. 2:433. P 3:40. A 1:262, 263.  
 See *Viola praemorsa* Douglas.  
**V. AUSTINAE** P 5:30.  
**V. AVERII** K, Pac Rural Press 31 My 1879. Cur 1:131—"evidently *V. Patrini* DC. var. *Chinensis*." Collected on the Chinese wall by B. P. Avery.  
**V. BECKWITHII** T & G Pac Ry R 2: 119 t 1. B 1:58. 2:433. Par 31.  
**V. BELLIDIFOLIA** P 4:9.  
**V. BERNARDI** Pollard, Brit man 635. P 3:260, 5:123.  
**V. BICOLOR** P 4:292.  
**V. BIFLORA** L, sp pl 936. B 1:57.  
**V. BLANDA** Willd, Hort Berol t 24. B 1:55. Ab 254. A 1:127d. P 4:9. 5:128.  
**V. BRAINERDII** P 5:39, 128.  
**V. BROOKSII** K, Cal Hort S 1879. Cur 1:131, probably a good sp; certainly not *V. aurea* as suggested in B 2:433. P 3: 36.  
**V. CANADENSIS** L, sp pl 936. Cockerell, W: 5:6. B 1:57. P 5:24. M 4:80.  
**VIOLA CANINA** L.  
 B 1:55. P 4:5, 6. Par 310. A 1:262d.  
 Variety *ADUNCA* Gray, Am ac pr 8:377 (1873). A 1:262d.  
 Variety *SYLVESTRIS* Regel. Cockerell. W 5:6.  
**V. CARDAMINAEFOLIA** P 4:285, 289. 5:131.  
**V. CAROLINA** P 3:259.  
**VIOLA CHRYSANTHA** Hook.  
 Ic Pl t 47 (1837). A 1:128 as Douglasii. L 1:263d. P 2:14 as Douglasii. B 1:58. 2: 433.  
 Leaves pinnatifid: fls orange-y, brown on back.  
 Variety *NEVADENSIS* K 2:229. Cur 1: 131—"scarcely differing from the ordinary form."  
**V. CLANDESTINA** P 4: 8.  
**V. COGNATA** P 3:145. 4:7.  
**V. COMMUNIS** Pollard, bot gaz 26:336 not Wiltrock. P 4:140 as papilionacea.  
**V. COMPACTA** P 4:286.  
**V. CONJUGENS** P 4:3.  
**V. CONSORS** P 5:100.  
**V. CRASSULA** P 5:95.  
**V. CRENULATA** P 4:295.  
**VIOLA CUCULLATA** Ait.  
 Ait, Hort Kew ed 1, 3:288. B 1:55. P 3: 143, 336. 5:96, 119. A 1:263d.  
 Cockerell w 5:6.  
 SBR (Parish 484).  
**V. CUNEATA** Wat 14:290. B 2:433.  
**V. CUSPIDATA** P 3:314, 335. 5:116.  
**V. CYCLOPHYLLA** P 4:7, 5:88 as Eucycla.  
**V. DACTYLIFERA** P 3:317.  
**V. DECORA** K, Pac Rural Press 31 My 1879. Cur 1:131, "a form with all the pet blue."  
**V. DELTOIDEA** P 3:317.
- V. DENTATA** Pursh. P 3:296, 140.  
**V. DESERTORUM** P 4:291.  
**V. DICKSONII** P 4:65, 5:103.  
**V. DISCURRENS** P 5:26.  
**V. DELPHINIFOLIA** Nutt, T & G Fl 1: 136. Cockerell, W 5:6.  
**V. DOUGLASII** Steud, nom 2:771 (1841). Ab 255. A 1:127d. P 2:114 cites *chrysantha* Hooker as a synonym.  
**V. ELEGANTULA** P 4:66.  
**V. EMARGINATA** P 3:255, 313. P 4:142.  
**V. ESCULENTA** P 3:314.  
**V. EUCYCLA** P 5:88.  
**V. FALCATA** P 4:3.  
**V. FILIPES** P 4:289.  
**V. FIMBRIATULA** P 4:139.  
**V. FLETCHERI** P 4:296.  
**V. FULCRATA** P 4:285.  
**V. GALACIFOLIA** P 5:30.  
**V. GEMINIFLORA** P 5:29.  
**V. GLABELLA** Nutt, T & G Fl 1:142. B 1:57. P 3:81.  
**V. HALLII** G 8:377. B 1:57. 2:433.  
**V. HETEROPHYLLA** Muhlenberg, Le Conte Ann Lyc NY 2:139. P 3:314 as *esculenta* Ell.  
**V. ILLINOENSIS** P 4:293.  
**V. INDIVISA** P 5:124.  
**V. INSIGNIS** P 4:95.  
**V. LABRADORICA** Schrank, Reg Denk sch 1 (2): 12. P 4:290. 5:130.  
**V. LANCEOLATA** L, sp pl 934. P 5:128.  
**V. LAETICAERULEA** P 4:297.  
**V. LANGSDORFFII** P 3:81.  
**V. LANGLOISII** P 3:87.  
**V. LATIUSCULA** P 5:93.  
**V. LECONTEANA** Don, Gen syst 1:324. P 5:128.  
**V. LEPTOSEPALA** P 5:98.  
**V. LINGUAEFOLIA** P 3:39.  
**V. LOBATA** Bth 298. B 1:57. P 3:39. Ab 254. A 1:128d.  
 Variety *INTEGRIFOLIA* Wat. A 1:128.  
 Variety *PETIOLATA* Rose. A 1:128.  
**V. LONGIPES** Nutt, T & G Fl 1:140. B 1:56 as *canina* var: 1.  
**V. MACOUNII** P 3:335.  
**V. MACROSTIS** P 5:97.  
**V. MELISSAEFOLIA** P 5:103.  
**V. MISSOURIENSIS** P 4:141.  
**V. MISTASSINICA** P 4:5.  
**V. MONTANA** K 1:56. Cur 1:132 as *lobata*. B 1:58 as *Beckwithii*.  
**V. MONTICOLA** Jordan Obs 2:37 (1846).  
**V. MONTICOLA** Rydb, Fl Mont 264. P 4: 307 as *oreophila*.  
**P. MURICULATA** P 5:28.  
**V. NEOMEXICANA** P 5:28.  
**V. NEPETAEFOLIA** P 5:92.  
**V. NEPROPHYLLA** P 3:144.  
**V. NESIOTICA** P 5:102.  
**V. NODOSA** P 4:296. 5:104, 117.  
**V. NUTTALLII** Pursh, Fl 1:174. B 1:57. 2:433. P 3:36, 38. Cockerell W 5:6. Parry. Pl Wyo 4.  
**V. OSIIQUA** Hill. P 3:142. 5:96.  
**V. OCELLATA** T & G Fl 1:142. B 1:56. Par 52. M 3:116.  
**V. ODORATA** L. English violet. B 1:55.  
**V. OPHIOPHILA** P 5:88.  
**V. OREOCALLIS** P 4:288.  
**V. OREOPHILA** P 4:307.  
**V. OVATA** Nutt, Gen 148 (1818). P 3:139. 4:129 as *fimbriatula*.  
**V. OXYCHERAS** P 3:255.  
**V. PALMATA** L, sp pl 933. P 3:141, 260. 5:133. A 1:128.

Variety **CUCULLATA** G. Da 3. Ab 254. A 1:128d.

**V. PALUSTRIS** L, sp pl 934. P 3:81. 4:296. B 1:55.

**V. PEDATA** L, sp pl 933.

Variety **INOENATA** P 3:35, 34, 355:126.

**V. PAPILIONACEA** P 4:140.

**V. PARNASSIFOLIA** P 5:32.

**V. PEDATIFIDA** Don, Gen syst 1:320. P 3:259. 5:123.

**V. PEDUNCULATA** T & G Fl 1:141. Par 124 t. Ab 254. A 1:127d. Br 1:207 Rosa. B 1:56. Da 3. M 3:70.

**V. PETROPHILA** P 4:286.

**V. PERAMOENA** P 5:94, 119.

**V. PHILIPPIANA** P 2:14, based on *Viola chrysantha* Philippi, Linnaea 33:15 (1864) not Schrader, in Reicheub Ic exot t 114 (1834), nor Hooker, Ic Pl t 47 (1837).

**V. PINETORUM** P 3:14, 42. A 1:127 fdr, 263 as *purpurea* var: p.

**V. POPULIFOLIA** P 3:337. 5:116.

**V. PORTERIANA** P 3:256 s.

**VIOLA PRAEMORSA** Douglas.

Douglas in hb, Lindl, Bot Reg xiv, t 1254 (1829).

*Viola aurea* Kell. Leaves ovate or narrower, crenate.

B 1:56 (of Bth 298 as *aurea*), 57 as Nuttallii. A 1:263d, 262. P 3:37, 39.

Variety **VENOSA** G. A 1:263.

**V. PRATINCOLA** P 4:64. 5:117.

**V. PRIMULAEFOLIA** L. P 5:133.

**V. PRIONOSEPALA** P 5:99, 119.

**V. PSYCHODES** P 3:318.

**V. PUBESCENS** Ait Hort Kew 3:290. P 5:131.

Variety **SCABRIUSCULA** G, man 79. B 1:57 as *gibbella*.

**V. PURPUREA** K 1:56. Cur 1:131 as *aurea* var: *venosa*. Da 3. B 1:56.

Robinson, Syn Fl 1:200, refers this to *Viola praemorsa*.

Variety **PINETORUM** Greene, Fl Fr 243 (1891). A 1:127, 263.

*Viola pinetorum* Greene, Pittonia 2:14 (1889); 3:42 (1896).

Robinson, Syn Fl 1:200, refers this to *Viola praemorsa* var. *venosa* Gray.

**V. RAFINESQUEI** P 4:9.

**V. RANUNCULIFOLIA** P 3:260.

**V. RENIFOLIA** G. 3:288. P 5:128.

**V. RETROSCABRA** P 4:290.

**V. RETUSA** P 4:7.

**V. ROTUNDIFOLIA** Michx, Fl 2:150. P 3:254. 4:8. 5:132.

**V. RUGULOSA** P 5:26, 129.

**V. RYDBERGII** P 5:27.

**V. SAGITTATA** Ait, Hort Kew ed 1, 3:287. P 3:317. 5:133.

**V. SANDBERGII** P 5:119.

**V. SARMENTOSA** Dougl, Hook Fl 1:80. B 1:57. P 4:8 as *sempervirens*.

**V. SCOPULORUM** P 5:27.

**V. SECEDENS** P 5:121.

**V. SECURIGERA** P 5:29.

**V. SELKIRKII** Pursh, Edinb Phil J 6:324. P 5:122.

**V. SEMPERVIRENS** P 4:8. Par 143.

**V. SEPTEMLOBA** P 4:9.

**V. SEPTENTRIONALIS** P 3:334, 4:294.

**V. SEQUOIENSIS** K 2:185 f 55. Cur 1:132 et B 1:57 as *lobata*.

**V. SHELTONI** T, Pac R 4:67 t 2. B 1:58.

**V. STREIATA** Ait, Hort Kew ed 1, 3:290. P 5:132.

**V. SUBCORDATA** P 3:316, 4:286.

**V. SUBJUNCTA** P 5:31.

**V. SUBROTUNDA** P 5:118.

**V. SUBSAGITTATA** P 3:315, 5:120.

**V. SUBSINUATA** P 4:5.

**V. SUBVESTITA** Greene, Er 5:39. P 5:130.

**V. SUBVISCOSA** P 4:293. 5:101.

**V. TENELLA** Raf, Am mo mag 4:191.

P 4:9 as *Rafinesqui*.

**V. TRICOLOR** L, sp pl 9:35. P 4:9. B 1:56. Eu.

**V. UNGUICULATA** P 4:291.

**V. VAGULA** P 4:67.

**V. VARIABILIS** P 5:90.

**V. VENUSTULA** P 3:335, 4:295.

**V. VICINALIS** P 4:9.

**V. VILLOSA** Walt, Fl Carol 219. P 3:144. = *cucullata* fide IK.

**V. VITTATA** P 3:258.

**V. WATSONI** P 4:5. 5:101.

**VIOENA** Reichb, Handb 277 (1837). = *Clematis* fide IK.

**V. ARIZONICA** M 1:40.

**V. HIRSUTISSIMA** M 1:40.

**VISCAINOA** Greene.

**V. GENCULATA** P 1:163 based on *Staphylea geniculata* K. P 1:208, Cedros; Son; Baja; Island in Gulf of Cal (Palmer). Calmali!

Br 2:137 (12 N 1889):—"Lvs simple or imparipinnate, with 3-5 lfts: petioles oft more than  $\frac{1}{2}$  in length: fls ochroleucous. Abundant in some places, and called by the inhabitants, who have a very good idea of its botanical affinities, gulacen.—San Raimundo, San Fernando [Baja, Calif.]"

*Chitonla simplicifolia* Watson ined.

**VIRGARIA** Rafinesque.

**V. CONCOLOR** Raf. Gifts 1:5.

**VISCUM** Tourn ex L, Gen ed 1, 284 (1737).

**V. BOLLEANUM** Seem, bot Herald 295 t 63. B 2:105 as *Phoradendron* B.

**V. FLAVESCENS** Pursh. B 2:105 as *Phoradendron* f.

**V. TOMENTOSUM** DC. B 2:105 as *Phoradendron flavescens* var: t. Mex.

**V. VAGINATUM** HBK. B 2:107 as *Arceuthobium* v.

**VITACEAE** A 1:291d.

**VITEK** Tourn ex L, Syst ed 1 (1735).

**V. CALIFORNICA** Benth, bot Sulph 10 (1844), error = *Vitis Californica*. A 1:292 s.

#### Genus **VITIS** Tournefort.

L, syst ed 1, (1735); Gen. ed 1, 56 (1737). A 1:292 d.

**V. ARIZONICA** E, Am nat 2:321, 9:268. B 1:104.

**VITIS CALIFORNICA** Benth.

Bth, bot Sulph 10 (1844); A 1:292 d. Da 4. B 1:104.

Type locality: "Rio Sacramento," Cal. Benth, Pl Hartw 302 (1848).

*Vitex Californica* Benth, bot Sulph 10 (1844).

**VITIS GIRDIANA** Munson.

SC prom agr sci pr 1887, 59. Ab 245. A 1:292 d.

**V. VINIFERA** L, spp 202. B 1:104.

**VITTARIA**. P 4:106 as *Oetosis* Necker.

**V. ELONGATA** Swz. Syn 109 (1806). P 4:106 as *OE*.

**V. ENSIFORMIS** Swz lc. P 4:106 as



OE:e.

V. FILIFORMIS Swz. lc. P 4:106 as

OE:f.

V. ISOETIFOLIA Swz. lc. P 4:106 as

OE:l.

V. LINEATA Swz. P 4:106 as OE:l.

V. ZOSTERAEFOLIA Willd sp 5:406

(1810). P 4:106 as OE:z.

**VLECKIA** Rafin. Med. Rep NY 5:352(1808)=*Lophanthus* fide lk.**V. OCCIDENTALIS** M 1:4.**VULFIA** C C Gmel. Fl Bad 1:8 (1805)=*Festuca* fide lk.

V. MICROSTACHYA Munro in Bth 342.

B 2:317 s.

V. MYRUS Gmel. lc. B 2:316 s.

**WAHLENBERGIA****W. CALIFORNICA** K 2:158 f 49. Cur1:141 et B 1:448 as *Campanula lineatifolia*G (M 1:46 as *C. Californica*).**WASHINGTONIA** Raf. A 1:269 s.**W. BRACHYPODA** Heller. Ab 281. A

1:269 s. M 4:66.

**W. NUDA** Heller. A 1:269 s.**Genus WASHINGTONIA Wendland.****W. AMERICANA** Hort ex Gord. Pinetsuppl 106.=*Sequoia gigantea*.**W. CALIFORNICA** Kinsl. in Cal Farm

(S 1854); ex Hook. Kew J 7:29 (1859).

B 2:117 as *Sequoia gigantea*.**WASHINGTONIA FILIFERA** Wendl.

Bot Zeit 37:68. B 2:211, 485. A 1:95 d.

M 4:41.

Variety **ROBUSTA** Parish, bot gaz (D

1907). M 4:41.

**W. GIGANTEA** Hort ex Carr Conif ed 2,217 as *Sequoia* g.**W. GRACILIS** Parish, bot gaz (D 1907).

M 4:41.

**W. ROBUSTA** Wendland, Berl Gart-Zeit

2:198 (1883). M 4:41.

**W. SONORAE** Wat. M 4:41. Son. Baja.

"A tree reaching 25' in height and a

foot in diam: lvs 3 or 4' in diam, some-

what glau, very filiferous, upon rather

slender petioles which are armed with

stout curved spines: spadice slender, 5

or 6' lg: fr about 3" lg, the flattened-

globose sd 2 to 2½" in the longest

diam. apparently distinct from *W. fili-**fera* and *W. robusta* in its more slender

petioles, more glau lvs, and sm fr. The

sds are used for food by the Indians.

It may here be noted that in the 'Genera

*Plantarum* the genus *Washingtonia* is

placed in the group having basilar styles

though it is correctly described as hav-

ing the style terminal. In secluded

canons in the mts about Guaymas."—

Wat 24:79 (31 Ja. 1889).

**WEBERIA** Hedw.=*Bryum*.**W. ALBICANS** Hedw. B 2:392 as B:a.**W. BICOLOR** Hoppe & Hornsch. B 2:391

as B:b.

**W. COMMUTATA** Schimp, syn, ed 2, 403

B 2:391 as B:c.

**W. CRUDA** Schimp. B 2:391 as B:c.**W. CUCULLATA** Schimp. B 2:391 as B:c**W. INTERMEDIA** Schwaegr, suppl t 75.

B 2:393 as B:l.

**W. NUTANS** Hedw. Musc Frond t 4. B

2:391 as B:n.

**W. POLYMORPHA** Schimp. B 2:390 as

B:p.

**W. TOZERI** Schimp. B 2:392 as B:t.**WEISBIA** Hedw.**W. CIBREATA** Hedw. B 2:362, Wash.

Ore. Eu. Cal.

**W. CRISPULA** Hedw. B 2:363, Arctic,

Wash. Ut. Colo.

**W. CONTROVERSA** Hedw. B 2:362 as*viridula*.**W. STARKEANA** Hedw. B 2:362 as*Pottia* s.**W. VIEIDULA** Bridel. B 2:362, SF, Eu,

Atlantic coast.

**WELLINGTONIA** Lindl. Gard Chron1853:819. 823.=*Sequoia*.**W. GIGANTEA** Lindl. lc. B 2:117.=S:g.**W. CALIFORNICA** Sargent, Rep For NAM 184 = S: *gigantea*.**WHEELERELLA** George B Grant, SCAb 5:28 based on *Piptocalyx* T.**W. CIRCUMSCISSA** Grant, lc. LA Co.**W. DICHOTOMA** Grant, lc. Nev.**WHIPPLEA MODESTA** T. Pac Ry R 4:

90 t 7. Par 36 t.

Parish. Er 7:92. Near Redlands, Cal. B

1:203. Monterey to Mendocino Co,

2:446 (Humboldt Co, Cal; Ore).

Sts slender, spreading or trailing: lvs

membranaceous, ovate or oval, obtusely

few-toothed or sometimes entire, 1' or

less lg; peduncle slender, bearing a sm

and close few-fld cluster: fls hardly 2"

lg: cx-tube almost hemispherical, adnate

to base of the 4-celled (sometimes 3-5-

celled) ova and globular cap: sty at

length decid: sd oblq.

**WHIPPLEA UTARENSIS.**

"Shrubby, low (6' hi), much branched;

pubescence strigose, mostly appressed:

lvs oblq, attenuate to a very short peti-

ole, 3-5" lg, acutish, entire, sparingly

hairy, 3-nerved; fls sm, few, on very

short pedicels, in a dense compound

cyme; calyx cylindrical-turbinate, the

subulate lobes shorter than the w oblq

clawed pet; sta 10; sty 3 and ovary 3-

celled; cap oblq, terete, 1½" lg, adher-

ent for half its length to the calyx-tube.

Especially distinguished from *W. mo-**desta* by its elongated cap. Bud-scales

very silky. Kanab, southern Ut (Mrs. E.

P. Thompson). On dry sandy cliffs:

Ag.—Wat, Am nat 7:300 (My 1873). B

1:203. "Possibly Cal."

**WHITLAVIA** Harv. Hook L and J bot5:311 (1846). = *Phacelia* fide lk.**W. GRANDIFLORA** Harv, lc, 312. = P:*Whitlavia*. B 1:513.**W. MINOR** Harv, lc. = P: *Whitlavia*. B

1:514.

**WHITNEYA** G 6:549 (1865).**W. DEALBATA** G 6:550. B 1:374.**WIGANDIA** HBK, nov G et sp 3:126

(1818).

**W. CALIFORNICA** H & A, bot Beech364. B 1:518 as *Eriodictyon tomentosum*.**Genus WISLIZENIA Engelmann.***Wisl* r 99. A 1:261d.**W. CALIFORNICA** Greene. A 1:145 fdr.**W. DIVARICATA** Greene. A 1:145 fdr.**W. PALMERI** G 8:622. B 1:52.**WISLIZENIA REFRACTA** Engelmann.*Wisl* r 99. B 1:52. A 1:261 fdr.(Greene, Fl Fran. A 1:145 as *Califor-**nica*.)

The Cal plants hitherto referred to

this are considered by Greene as dis-

tinct species.

**WOLFFIELLA.**

**W. LINGULATA** Ab 79.

**W. OBLONGA** Ab 79.

**W. WITHANIA** Pauq, Diss Bellad 1824:14.

**W. CORONOPUS** T. Mex Bound 155. B 1:540 as Chamaejasarachia C.

**WOODVILLEA** DC 5:318 (1836) = *Eri-geron* fide IK.

**W. CALENDULACEA** DC, lc. B 1:331 as *E. glaucus*.

**WULFENIA** Jacq, Misc 2:62 (1781). = *Synthyris*.

**W. BULLII** Barnhart, T cl b 26:378 (1899). M 1:4 as S: B.

**W. CORDATA** Greene, man 280 (1894). M 1:4 as S: c.

= *Synthyris reniformis cordata* G. **W. GYMNOCARPA** Aven Nelson, T cl b 25:282 (1898). M 1:5 as S: g.

**W. HOUGHTONIANA** Greene, Er 2:83 (1894). M 1:4 as S: Bullii.

**W. MAJOR** Heller Cat 7 (1898). M 1:5 as S: m.

**W. RENIFORMIS** Dougl, ex Bth Scroph Ind 46; Hook Fl 2:102 t 71.

Variety **MAJOR** Hook J bot Kew Gard misc 5:257 (1853). M 1:5 as S: major.

**W. WYOMINGENSIS** Aven Nelson, T cl b 25:281 (1898). M 1:5 as S: W.

**Genus WYETHIA Nuttall.**

*Phil ac J* 7:39 t 5 (1834).

**W. AMPLEXICAULIS** Nutt, Am phil sc tr, ns, 7:352. B 1:350, 2:456.

**W. ANGUSTIFOLIA** Nutt, Am phil sc tr 7:352. B 1:350. Par 161.

**W. CORIACEA** G 11:77. B 1:616. Ha 131. SD mts (Palmer); Baja!

**W. GLABRA** G 6:543. B 1:349. Par 161.

**W. HELLIANTHOIDES** Nutt, *Phil ac J* 7:38. B 1:350.

**W. HELENIODES** Nutt; G, Pl Fendl 352. B 1:350 as *angustifolia*.

**W. MOLLIS** G 6:544. B 1:349. Par 161.

**W. OVATA** G 7:357. B 1:349.

**W. ROBUSTA** Nutt, Am phil sc tr 7: 82. B 1:349. Par 161.

**XAMACRISTA** P 4:26.

**Genus XANTHIUM Tournefort.**

*L*, syst ed 1 (1735). P 4:59.

**X. ACEROSUM** P 4:63.

**X. ACUTUM** P 4:62.

**X. AFFINE** P 4:60.

**X. CALIFORNICUM** P 4:62.

**X. CAMPESTRE** P 4:61.

**X. CANADENSE** Mill, Dict ed 8. Greene, Cal ac b 2:403 Cruz, adventive. Ab 414. Z 1:58. P 4:59, 61, 62.

**X. GLANDULIFERUM** P 4:61.

**X. MACROCARPUM** P 4:59.

**X. ORIENTALE** P 4:58.

**X. PALUSTRE** P 4:63.

**X. SILPHIOLIFOLIUM** P 4:60.

**X. SPINOSUM** L, sp pl 987. B 1:346. Ab 413. Z 1:58. P 4:58.

**XANTHIUM STRUMARIUM** Linn.

*L*, sp pl 2:987 (1753). McClatchie, Er 2:125 Cat. Br, Colo 231. Cov 4:130 Charleston mts. B 1:346.

Type locality: "in Europe, Canada, Virginia, Jamaica, Zeylona, Japonia."

**X. VARIANS** P 4:59.

**XANTHOCEPHALUM** Willd.

**X. CALIFORNICUM** Greene, Man 171.

**XEROBOTRYS** Nutt, Am phil sc tr ns, 8:267 (1843). = *Arctostaphylos* fide IK.

**X. ARGUTUS** Nutt, lc, 268. B 1:453 as A: tomentosus.

**X. CORDIFOLIUS** Nutt, lc. B 1:453 as A: tomentosus.

**X. TOMENTOSUS** Nutt, lc, 267. B 1: 453 as A: t.

**X. VENULOSUS** Nutt, Bth 321. B 1: 453 as A: pungens.

**XEROPHYLLUM** Michx Fl 1:210 (1803).

**X. DOUGLASSII** Wat 14:284. B 2:186.

**X. SETIFOLIUM** Michx, Fl 1:211. (B 2: 185 as *tenax* as to Lindl, bot reg t 1613, not Michx.)

**X. TENAX** Nutt, Gen 1:235. B 2:185. Par 53. = *setifolium* fide IK.

**XIMENESIA** Cav, Ic 2:60 t 178 (1793). = *Verbesina* fide IK.

**X. ENCELIODES** Cav Ic 2:60 t 178. B 1:350 as *Verbesina* e. T & G Fl 2:359.

**XYLOCOCCLUS** Nutt, Am phil sc tr, ns, 8:258 (1843). = *Arctostaphylos* fide IK.

**X. BICOLOR** Nutt, lc, 259. B 1:454 as A: b.

**XYLORRHIZA** Nutt, Am phil sc tr, ns, 7:297 (1841). = *Aster* fide IK.

**X. FRUTESCENS** P 3:48.

**X. GLABRIUSCULA** P 3:47.

**XYLORRHIZA ORCUTTHII** Greene, *plitt* 3:48, based on *Aster orcuttii* A 1:58 fdr.

**X. PARRYI** P 3:47.

**XYLORRHIZA TORTIFOLIA** Greene.

P 3:48. A 1:58d.

**X. VENUSTA** M 1:8.

**X. VILLOSA** P 3:47. Parry, Pl Wyo 4.

**X. WRIGHTII** P 3:47.

Genus **XYLOTHERMA** Greene.

See *Pickeringia* for description.

**X. MONTANA** Greene, based on *Pickeringia* m. Par 236 t. Ab 206.

**Genus YUCCA Linnaeus.**

**YUCCA ALOIFOLIA** Linn.

**Y. ANGUSTIFOLIA** Pursh, Fl 1:227. Br, *YUCCA ARBORESCENS* Trelease.

Ab 92. Joshua tree, Mohave.

**Y. ALOIFOLIA** L, sp pl 319 (B 2:164 as Whipplei as to T. Pac Ry R 4:147.)

**Y. ANGUSTIFOLIA** Pursh, Fl 1:227. Br, Colo 244, 246. = *Glaucia* fide IK.

**Y. BACCATA** T. Mex bound 221. Br, Colo 228, 229, 244. B 2:164. (Cal pl = *Mohavensis*.)

**Y. BREVIFOLIA** E, ex Wat, bot king 496. B 2:164. Da 17. See *arborescens*.

See *Clistoyucca arborescens*.

**Y. DRACONIS** L, *Amoen* ac 3:407.

= *Dracaena draco* fide IK.

Variety **ARBORESCENS** T. Pac Ry R 4:147. = *brevifolia* fide B 2:164.

**Y. FILAMENTOSA** L, sp pl 310. B 2: 165.

**YUCCA GLORIOSA** L.

Stem from a few inches to 6 feet high, 4-6 inches in diameter, usually simple, covered with a shaggy coat of old withered pendant leaves; leaves about 2 feet long, 1½ to 2½ inches wide, stiff, sharply pungent; panicles 2-4 feet long, 1-1½ in diameter. North Carolina to Florida, on sandy sea beaches.

**Y. GRAMINIFOLIA** Wood, *Phil ac pr*



1868: 167. B 2:165 as Whipplei.  
**YUCCA MACROCARPA** Engelm.  
**Y. MOJAVENSIS** Sargent. Par 22. A 1:  
 184d.  
**YUCCA VALIDA** Brandegee.  
 Br. 2:20. Baja!  
**YUCCA WHIPPLEI** Torr.  
 Mex bound 222. Par 76. B 2:164. Da 17.  
 See *Hesperoyucca Whipplei*.  
 Variety **GRAMINIFOLIA** Ab 92.

**ZANNICHELLIA** Michx ex L, syst ed 1  
 (1735).  
**Z. MAJOR** Boenn, Nees Gen 3: t 46. B  
 2:193 as palustris.  
**ZANNICHELLIA PALUSTRIS** Linn.  
 Sp pl 969. B 2:193. Da 17. Ab 12.  
**ZAPANTA** Lam 1:58 t 17 (1791). P 4:45  
 as Phyla.  
**Z. CUNEIFOLIA** T. NY Lyc ann 2:234  
 (1826). P 4:47 as P: c.  
**Z. LANCEOLATA** Juss, Ann Mus Par 7:  
 72 (1806). P 4:47 as P: l.  
**Z. NODIFLOEA** Lam III 1:59 t 17 f 3  
 (1791). P 4:47 as P: n. B 1:610 as Lippia  
 n.  
**ZAUSCHNERIA** Presl, Rel Haenk 2:23  
 t 52 (1831). A 1:335d.  
**ZAUSCHNERIA ARIZONICA** Davidson.  
 "Sts 1-2' hi, decumbent, branching  
 from base; whole plant villous, not at all  
 tomentose; lvs ovate; 1-1½' lg and ½'  
 broad, broadly sessile and usually strong-  
 ly denticulate, feather veined and mark-  
 edly villous on mid-rib, veins and edges;  
 lower lvs frequently obovate; fls scarlet,  
 large, 1½' lg above ova; cx-tube cylin-  
 drical for 3" above globose base, minute-  
 ly villous, lobes 3" shorter than cor; sty  
 exserted 1' or more; sta somewhat less;  
 cap pedicellate, 1½' lg, slightly villous  
 at base; sds large, in form resembling  
 those of *Z. Californica* var: *microphylla*  
 G. Ar: Chase Creek, Metcalf; Ag 1900. A.  
 Davidson, 365. Not uncommon in the  
 moist sand of this rocky creek at 5000°  
 alt. Those found growing on drier  
 ground, tho of stricter habit and some-  
 what less villous, are quite as handsome  
 in fl."—Da. SCAB 1:4 f 1.

**Z. CALIFORNICA** Presl, Rel Haenk 2:  
 28 t 52. Greene, Cal ac b 2:397 Cruz. Br  
 1:210 Rosa. B 1:218. Da 6. A 1:335d. Par  
 372t. P 1:27, 88 Mig.

Variety **LATIFOLIA** Hook, bot mag t  
 4493. P 1:26 as sp. Ab 263. A 1:335d.

Variety **MICROPHYLLA** G, B 1:218. Ab  
 263. A 1:335 d. P 1:27 as typical of the  
 species.

**Z. CANA** P 1:28. Greene, Cal ac b 2:398.  
 Cruz.

**Z. MEXICANA** Presl, Rel Haenk 2:29.  
**Z. LATIFOLIA** P 1:25 based on Califor-  
 nica var: l. A 1:335 sub *Californica* var.  
 A 1:335 et. B 1:218 as *Californica*.

**Z. TOMENTELLA** P 1:26.  
**Z. VILLOSA** P 1:27. Greene, Cal ac b 2:  
 397 Cruz.

**Genus ZIZYPHUS** Juss.

**Z. PAREYI** T, Mex bound 46. B 1:99.  
 A 1:98d. Weberbauer in Eng & Prantl,  
 Natpf 3 Abt 5, 404 as *Condalia* P.  
**ZOSTERA** L. Diss Dass 27 (1747).

**Z. ANGUSTIFOLIA** Reicheub, Ic Fl

Germ 7:3. B 2:192 as marina var: a.  
**ZOSTERA MARINA** Linn.

L, sp pl 968. Greene, Cal ac b 2:414  
 Cruz. Ab 13. Da 17. B 2:192.  
 Variety **ANGUSTIFOLIA** Hornem,  
 based on sp.

**ZEBRINA** Schnizl, bot zeit 7:870 (1849).  
**Z. PUMILA** P 1:157; 4:225 as *Treleasea* p.

**ZEPHYRANTHES** Herbert (1821). P 3:  
 187 as *Atamosco* (Adanson of 1763).  
**Z. ARENICOLA** Br 2:205. P 3:187 as A  
 a. Baja.

**Z. ATAMASCO** Herb, app bot reg 36  
 (1821). P 3:187 as A: a.

**Z. PULCHELLA** J G Smith, Mo bot  
 gard r 6:114. P 3:187 as A: p. Tex.

**Z. ROSA** Lindl, bot reg t 821 (1824). P  
 3:188 as A: r. West Indies.

**Z. SIMPSONI** Chapm, Fl SUS, ed 3, 493  
 (1897). P 3:187 as A: S. Fla.

**Z. TAUBERTIANA** Harms in Garten-  
 flora 45:281 t 1427 (1896). r 3:188 as A:  
 T. Brazil.

**Z. TEXANA** Herb, bot mag sub t 3482.  
 P 3:187 as A: T. Tex.

**Z. TREATIAE** Wat 14:300. P 3:187 as  
 A: T. Fla.

### Genus ZYGADENUS Michx.

Stems simple, scale like, from a tuni-  
 cated bulb, glabrous and somewhat  
 glaucous, with linear mostly basal  
 leaves and greenish white flowers, in a  
 raceme or panicle. Perianth nearly ro-  
 tate, segments ovate to oblong-lanceo-  
 late, with a green glandular spot at the  
 narrowed base. Stamens free from the  
 segments and about equalling them;  
 fil subulate; Sty distinct persistent. Sap  
 deeply 3-lobed. Seeds brownish, angled.  
*Zygadene*.

**ZYGADENUS ANGUSTIFOLIUS** S. W.  
**Z. CHLORANTHUS** H & A, bot Beech  
 402. B 2:183 as *Fremontii*.

**Z. CHLORANTHUS** Richards. B 2:183  
 as *elegans*.

**Z. DOUGLASII** T, Pac Ry 7:20. B 2:183  
 as *Fremontii*.

**ZYGADENUS ELEGANS** Pursh.

B 2:183. Ore, Nev. Ar.

**ZYGADENUS FREMONTII** Torr.  
 Pac Ry R 7:20. Greene, Cal ac b 2:413  
 Cruz. Br 1:217 Rosa. Ab 83. Par 6 t.

B 2:183.

Bulb oblg, 2-5 cm lg, with dark coats;  
 sts 4-8 dm hi; basal lvs 2-4 dm lg, 1.5-  
 2.5 cm broad at base, somewhat falcate-  
 curving; st lvs few, sh'er, sheathing at  
 base; fls few to many in a raceme or  
 panicle; lower pedicels 2.5-4 cm lg; seg  
 3-14 mm lg, the outer not clawed, the  
 inner with a broad claw; gland g'ish-y,  
 toothed on its upper margin; sta about  
 as lg as segs; cap oblg, about 2 cm lg.

**Z. GLABERRIMUS** H & A, bot Beech  
 160. B 2:183 as *Fremontii*.

**Z. GLAUCUS** Nutt. B 2:183 as *elegans*.

**Z. GRACILENTUS** P 4:241.

**Z. LONGUS** P 4:240.

**ZYGADENUS NUTTALLII** A. Gray.  
 Wat, bot king 343. B 2:183 as mainly  
 venenosus.

**ZYGADENUS PANICULATUS** S. Wat.  
 Wat, bot king 344. B 2:184.

**ZYGADENUS VENENOSUS** S. Watson  
 Wat 14:279. B 2:183. Par 6.

## FLOWERLESS PLANTS OF THE UNITED STATES

**CRYPTOGAMOUS** or flowerless plants, never bearing true flowers with stamens or pistils, are reproduced by minute homogenous bodies, called spores, in which there is nothing of the nature of an embryo. Botanists divide them into two classes, Acrogens and Thallogens.

**ACROGENOUS PLANTS** are those growing from the apex of a distinct axis, mostly with distinct leaves.

**THALLOGENS** are distinguished by having a growth chiefly peripheral and horizontal, without definite axis, mostly without leaves, and composed wholly of cellular tissue: the spores not developing a prothallus. The Thallogens include the three large orders, Lichenes, Fungi, and Algae, characterized from each other as follows:

**LICHENES.** Not parasitic, on exposed surfaces, prostrate and crustaceous or frondose, or erect, containing chlorophyllose granules. Reproductive organs of two kinds, apothecia and spermatogonia.

**FUNGI.** Parasitic, wholly without chlorophyll, the organs of vegetation (mycelium) mostly subterranean or concealed, the reproductive very various in form and structure.

**ALGAE.** Aquatic, mostly submerged, not parasitic, always containing chlorophyll and usually highly colored. Reproductive organs very various.

**ACROGENS** are divided into two sub-classes:

**PTERIDOPHYTA, or VASCULAR ACROGENS.** Plants with both woody and cellular tissue: reproductive organs of one or both sexes produced upon a prothallus developed from the spore.

**CELLULAR ACROGENS.** Plants with cellular tissue only: reproductive organs borne upon the stem or branches. These are commonly divided into four large orders, characterized as follows:

\*Capsules mostly opening by a lid, containing num spores without spiral fibres.

**MUSCI.** Branches not regularly fascicled along the stem. Tissue of the leaves homogeneous. Spores of one kind.

**SPHAGNACEAE.** Branches regularly fascicled. Tissue formed of colorless cells and intermediate green linear ducts. Spores of two kinds. Pale flaccid bog plants.

\*\*Capsule not opening by a lid: spores mixed with spiral fibres (elaters).

**HEPATICA.** Stems procumbent, leafy with alt or distichous lvs, or thalloid.

\*\*\*Sporangium consisting of a single spore surrounded by spirally arranged tubes.

**CHARACEAE.** Submerged aquatics, with whorled branches, consisting of tubular cells placed end to end.

**PTERIDOPHYTA** Cohn. Vascular Acrogens.

These are placed in two divisions.

**I.—ISAPOROUS VASCULAR ACROGENS.** Spores only of one kind, the prothallus bearing organs of both sexes. This group comprises the following orders:

**EQUISETACEAE.** Cylindric jointed hollow-stemmed plants, with toothed sheaths. Fructification in a terminal spike.

**OPHIOGLOSSACEAE.** Fronds often fern-like, erect in veneration. Sporangia globose, coriaceous, in special spikes or panicles.

**FILICES.** Ferns, with fronds circinate in veneration, bearing the fructification on the under surface or beneath the margin.

**LYCOPODIACEAE.** Club-Moss or Ground-Pine. Moss-like, terrestrial plants with small lanceolate or subulate, sometimes oblong or roundish, simple lvs, arranged in 2 to many ranks on trailing or sometimes erect, usually branching stems.

**II.—HETEROSPOROUS VASCULAR ACROGENS.** Spores of two kinds, one producing a prothallus with archegonia, the other smaller and containing antherozoids. This group contains the following orders:

**SELAGINELLEAE.** The two kinds of spores borne separately upon the upper side of the base of linear grass-like radical lvs or in the axils small lvs arranged in 4 ranks upon a stem.

**MARSILIACEAE.** Spores of both kinds together in peduncled capsules borne upon a rhizome. Lvs filiform or pedately quadrifoliate.

**SALVINIACEAE.** Small floating plants, the spores borne in separate capsules at the base of the frond.

**ISOETACEAE.** Lvs awl-shaped, tubular, containing the sporangia in their axils.

Order **OPHIOGLOSSACEAE** Lindley.

**BOTRYCHIUM** Swz. Grape-fern.

Sporangia in pinnate or compound spikes or panicles. Veins free. Spores copious, sulphur-yellow.

Section **EUBOTRYCHIUM** Bud enclosed in the base of the stalk.

\*Veneration wholly straight.

**B: SIMPLEX** E. Hitchcock.

Plant 2-7' hi, fleshy; sterile seg stalked, varying in insertion from near the rtstalk to two-thirds the height of st. ovate, obovate or oblong, entire, incised, or pinnately parted into 1-3 pairs of roundish or semi-lunate lobes; fertile spike long-stalked, simple or ½-pinnate; spores largest of genus, closely covered with small points; bud smooth; apex of both sterile and fertile seg erect.

New England, NY, northward.

Variety **COMPOSITUM** Lasch.

Sterile seg composed of 2 or 3 pinnately incised divisions. Wyo; Cal.

\*\*Veneration partly inclined in one or both portions. I.—Buds smooth; sterile seg sessile or short-stalked; plant small, fr'ng in early summer.

**B: LUNARIA** Swz.

Moonwort. Plant 5-8' hi, fleshy; sterile seg nearly sessile, borne near the middle of stalk, oblong, simply pinnate with 5-15 lunate or fan-shaped lobes which are crenate, incised, or entire, close and overlapping, or distant; fertile seg bi-tri-pinnate, panicle, about the height of the sterile. Apex only of sterile seg bent over and outside of the nearly straight fertile seg in veneration; divis-



lons of sterile frond arranged nearly perpendicularly. Ct; NY; Mich; Colo; BC.  
**B: BOREALE** Milde.

Plant 2½-7' hi, smooth, fleshy; sterile seg placed above the middle, sessile, cordate, ovate or deltoid, pinnately parted, acute; lowest seg spreading from a narrower base, ovate or cordate-ovate, acute, all entire, or here and there flabellately incised with acute lobes, or pinnately parted; secondary seg from a narrowed base, ovate, acute, serrate, the upper spreading, quickly decreasing, finally elliptical, acute; fertile seg bi-tripinnate, panicle. Apex of sterile seg bent over inside of the nearly erect fertile one in vernation; division of the sterile seg arranged on an angle. Unalaska.

**B: NEGLECTUM** Wood.

Plant 2-12' hi, usually fleshy; sterile seg placed above the middle, short stalked or sessile, ovate or oblong, pinnately parted into ovate-oblong, obtuse, rounded, entire, incised, pinnatifid, or pinnately parted seg; the narrow divisions linear; fertile seg 1-3-pinnate, panicle, often very much branched; spores thickly covered with large rounded warts. Apex of both segments turned down in vernation; sterile seg clasping the fertile with its apex overlapping the whole. New England; NY; Ohio; Mt Peddo, Washington (Suksdorf). Synonym: *B. matricariaefolium* A. Br. fide recent authors.

**\*\*II.**—Buds pilose; sterile seg usually long-stalked; plant larger, fr'ng in autumn.

**B: TERNATUM** Swz.

Frond fleshy, the common stalk very short; sterile seg broadly pentagonal or triangular, ternate; the 3 primary divisions also stalked, as broad as long, pinnately decompound; ultimate divisions varying from round-reniform to triangular-lanceolate, entire or variously toothed and incised; fertile seg long-stalked, biquadri-pinnate. Apex of both seg bent down, with a slight curve inward in vernation. New England; Canada; BC; Fla; Wash; Cal. Synonyms: *B: australe* R. Br.—*B: lunarioides* Swz.—*B: fumarioides* Willd.—*B: decompositum* Mart & Gale.—*Osmunda ternata* Humboldt.—*Botrypus lunarioides* Mich.

Variety **OBLIQUUM** Milde.

Form 6-17' hi, with more compound fructification and with divisions of sterile seg oblong or lanceolate and obtuse or oblique at base.

Variety **DISSECTUM** Milde.

Form with divisions of sterile seg lacinately cut into narrow teeth.

**\*\*\***Vernation wholly inclined, in the fertile seg recurved.

**B: LANCEOLATUM** Angst.

Plant 3-9' hi, somewhat fleshy; sterile seg closely sessile at top of a long common stalk, in the smallest forms 3-lobed, in larger ones broadly triangular, twice pinnatifid, the divisions lanceolate, entire or toothed, all set at an oblique angle; fertile seg short-stalked, slightly overtopping the sterile, bi-tri-pinnate. Bud smooth; fertile seg recurved its whole length, the shorter sterile seg

reclined upon it. New England; Colo; Alaska.

Section **OSMUNDOPTERIS**. Bud pilose, enclosed in a smooth upright cavity at one side of the lower part of the stalk.

**B: VIRGINIANUM** Swz.

Rattlesnake fern. Plant from a few inches to 2' hi; sterile seg sessile above the middle of the stalk, broadly triangular, thinly herbaceous, ternate; the short-stalked primary divisions once to twice pinnate, thence once or twice pinnatifid; lobes oblong, cut-toothed toward apex; fertile seg long-stalked, bi-tri-pinnate. Bud pilose, enclosed in a smooth upright cavity at one side of the lower part of stalk; fertile seg recurved its whole length, the longer sterile segs reclined upon it. New Brunswick to Fla; Arizona; Cal. Synonyms: *B. gracile* Pursh (a reduced form), *Botrypus Virginicus* Michx.—*Osmunda Virginica* L.

Other species of *Botrychium* credited to North America north of Mexico, are the following:

**B: BITERMATUM** (Lam.) Underwood.

**B: COULTEI** Underwood.

**B: DISSECTUM** Spreng.

**B: MATRICARIAE** (Schrank) Spreng.

**B: OBLIQUUM** Muhl.

Variety **INTERMEDIUM** (D. C. Eaton) Underwood.

**B: OCCIDENTALE** Underwood.

**B: PUMICOLA** Coville.

**B: SILAIFOLIUM** Presl.

**B: TENEBROSUM** A. A. Eaton.

**CHEIROGLOSSA** Presl.

Fertile spikes several, arising from the base of sterile seg. Treated in the past by many botanists as a section of *Ophioglossum*, and monotypic, based on the Linnaean *Ophioglossum palmatum*.

**C: PALMATA** (L.) Presl.

Rootstalk fleshy, tuberous, covered with fine wool-like chaff; plant fleshy, 6'-2' hi, the sterile seg cuneate at base, 2-6-lobed or rarely entire, lobes elongate and tapering; fertile spikes ¼ or more, borne on the sides of the stipe just below the sterile seg on its margin. Fla.

**OPHIOGLASSUM** L.

Fertile spike single, arising from the base of sterile seg.

\*Sterile portion near the middle of stalk.

**O: VULGATUM** L.

Rtstalk short, oblique; stalk 6-12' hi, sterile seg ovate or elliptical-oblong, 1½-4' long, somewhat fleshy, somewhat narrowed at base, sessile; fertile spike 1' or more long. Me to Ky; Tenn; Tex; Arizona; Alaska. Synonym: *O. Engelmanni* Prantl (fide Underwood). Adder-Tongue.

**\*\***Sterile portion near base of stalks.

**O: CROTALOPHOROIDES** Walt.

Rtstalk tuberous, 3-5' thick; stalk 3-6' hi, sterile seg ½-1' long, ovate, slightly petioled, veins somewhat indistinct; fertile spike short and thick, 3-6" long. Fla to La. Synonyms: *O. bulbosum* Michx.—*O. vulgatum* *Crotalophoroides* D. C. Eaton (all fide Underwood).

**O: RUPESTRIS** Linnaeus f.

Rtstalk slightly tuberous; stalk 1-4' hi, sterile seg ½-1½' long, ovate or oblong,

veins indistinct; fertile spike linear-acuminate, 6" long, peduncle very slender. Ga; Fla; Cal. Synonyms: *O. ellepticum* H & G.—*O. Californicum* Prantl.—*O. vulgatum nudicaule* D. C. Eaton (all fide Underwood).

**O: CALIFORNICUM** Prantl.

Considered by Underwood as *O. nudicaule*.

"Plants small, only 2-6 cm hi; rtstalk cylindric, tuberous, elongated with num large rts; lvs  $\frac{1}{2}$  sheathed at base by the old ones of the previous year; petioles entirely subterranean, 1-2 cm long; sterile lamina 1-2 cm long; 0.4-0.7 mm wide, lanceolate or ovate-acute, rarely obtuse, or apiculate; fleshy, rugose when dry; basal veins 3, median the stronger, lateral ones branched; transverse veinlets oblique, forming long narrow areolae with few or no free veinlets near the margin; epidermis wrinkled, cells flexuous, stomata straight; peduncle arising from the base of the sterile lamina, only 5-15 mm long; spike 5-10 mm long; sporangia 10-15 pairs, apex short; spores .05 mm lg, reticulate, areolae 20-25, rounded, striae unequal, not elevated."—E. G. Britton. Torr cl b 24:555 (30D 1897). near SD.

Other species credited to North America north of Mexico are the following:

**O: ALASKANUM** E. G. Britton.

**O: ARENARIUM** E. G. Britton.

**O: ENGELMANNI** Prantl.

"Plants 8-22 cm hi; rtstalk cylindric with long, brown rts, rt bearing 2-3 fr'ng and 1 sterile lf on the same plant with the sheathing base of the old lvs frequently persistent; petiole subterranean or partly exserted, 4-10 cm long; sterile lf elliptic or lanceolate-elliptic, obtuse but sharply apiculate, 3-9 cm lg, 1.5-5 cm broad; fleshy, becoming pellucid when old and dry, slightly paler beneath; basal veins 13 or more, median one slightly stronger and unbranched below the middle of the frond, forking and anastomosing with the lateral ones above; lateral inner veins parallel and approximate, outer ones arcuate-erect; transverse veinlets oblique and large, forming broad oblong-hexagonal areas with num anastomosing or free veinlets included; cells of the epidermis flexuous, much elongated in the middle beneath, stomata num; peduncle starting from the petiole or the base of the sterile lamina, 3-9 cm long; spike 1.5-2.5 cm long, apiculate, sporangia 12-27 pairs; spores .045-.05 mm in diam, areolae 15-20, angular, striae not elevated."—E. G. Britton, Torr Cl b 24:554 (30D 1897).

Considered by Underwood as *O. vulgatum*.

Order **MARSILIACEAE** R. Br.

Genus **MARSILIA** Linnaeus.

Sporocarps ovoid; lvs quadifoliate. A genus of 40 or more species.  
\*\*Sporocarps 2-6 on each peduncle.

**M. QUADRIFOLIA** L.

Plant com slender, 5-12 cm hi; lfts variable, 4-14 mm wide, 5-15 mm long, margins entire, smooth, or rarely with

2 (rarely 3) on a branching peduncle, scattered hairs when young; sporocarps which is com attached to the stipe near its base, but sometimes as much as 2 cm above; young sporocarp with short y'ish-brown hairs, later becoming naked and dark p; lower tooth obtuse, upper small, acute or obtuse; sori 8-9 in each valve. Bantam Lake, Litchfield Co. Conn (Dr. T. F. Allen). La (Dr. Hale), fide Wood, Cl-bk bot 810.

**M: MACROPODA** Engelmamm, Am J Sci, sr 2, 3: 56 (1847).

Plant robust, 10-25 cm hi; lfts large, 2-5 cm lg, 2 cm wide or less, com undulate, clothed with w hairs on both sides when young, becoming smoother with age; sporocarps 2-6, on erect branching peduncles, ascending, densely villous, 6-8 mm lg, 5-6 mm wide; raphe short, lower tooth obtuse, upper inconspicuous or 0; sori 10 in each valve. Tex; NM. Synonym: *M. macropus* A. Br. (fide Underwood).

\*\*Sporocarps 1 (rarely 2) on each peduncle.

**M: UNCINATA** A. Br.

Plant 6-20 cm hi; lfts nearly smooth, entire, 10-16 mm lg; sporocarps 6 mm wide, 8 mm lg; peduncles 15-30 mm lg, 2-4 times as long as sporocarps; raphe long, terminating in 2 approximate teeth, upper longer and mostly uncinately curved; sori 13-14 in each valve. La (Hale) Tex (Reverchon).

**MARSILIA VESTITA** H. & G.

Plant 3-6 cm hi; lfts entire or slightly toothed; sporocarps 4-7 mm long, 3-5 mm wide; raphe short, lower tooth short and blunt, upper acute, a little longer, sometimes curved; paleae varying from soft, dense and spreading to short and appressed, in mucronata forms, where it is sometimes 0; sori 6-11 in each valve; a very variable species. Ark; Ar; Tex; Kans; Nev; Ore; Wash; Mont; Dak; SD. Synonym: *M. mucronata* A. Br.

**M: TENUIFOLIA** Engelmamm.

Plant somewhat slender, 5-15 cm hi; lfts 2-4 mm wide, more or less falcate, apex often somewhat truncate and unequally toothed, villous with appressed hairs; sporocarps single, 5-8 mm long, 4-5 mm wide, teeth divergent, subequal; sori 9-11 in each valve. Texas. Synonym: *M. vestita tenuifolia*. Underwood & Cook.

Genus **PILULARIA** Linnaeus.

Sporocarps globose, lvs filiform. Six species.

**PILULARIA AMERICANA** A. Br.

Lvs setiform, 1' long; sporocarps 1" in diam, attached by the side to a short, descending peduncle, com 3-celled; macrospores 13-17 in each cell, not constricted in middle. S Bar (Mrs. Cooper) Ark (Nuttall); SD!

**SALVINIACEAE**.

**SALVINIA** Schreb.

Lvs 6-9" long, with a distinct midrib. Named for Salvini, a Florentine professor. Contains 13 species.

**S: NATANS** Hoffm.

Lvs oblong, horizontal, rounded or slightly cordate at base,  $\frac{1}{2}$ -1' long, bright g above, the under surface matted with brown, pellucid hairs; sporo-



carps 4-8 in a cluster. Bois Brule Bot-toms, Perry Co, Mo (Demetrio). NY (Pursh). Synonym: *Marsilla natans* L. **AZOLLA** Lam. A1:380d.

Lvs minute, num, closely imbricate, deeply lobed. Small moss-like plants, with pinnately branched stls. Five species.

**A: CAROLINIANA** Willd, sp pl 5:541. B 2:352 Da 20. Z 1:100. A 1:380d.

Plant 4-12" broad, much branched; lvs with ovate lobes, the lower reddish, the upper g with a r'ish border; macrospores with a minutely granulate surface; masses of microspores barbed at tip. Synonyms: *A. microphylla* Kaulf.—*A. Mexicana* Schlecht.

**A: FILICULOLEA** Lam. A 1:38d. Z 1:101.

"La Honda, San Mateo Co. Cal, 1890 (Brandegge), the plants so crowded as to stand upright. A larger and coarser plant than *A. Caroliniana*, easily distinguished in fr by the non-septate appendages to the massulae. Baker (Hand-book of Fern Allies 137), gives its habit as 'South America, mainly on the west side.' This adds another Chilian plant to the Cal flora."—Underwood, Zoe 1:101.

**A: SONOMENSIS** Greene.

Description not seen by the writer.

Order **EQUISETACEAE** DC.

**EQUISETUM** L.

Horse-tail or scouring-rush, the only genus known in this order.

Section **EQUISETUM**. Sts ann, stomata scattered.

\*Sts of 2 kinds, the pale or brownish fertile sts appearing earlier than the herbaceous sterile ones; fr'ng in spring.

I.—Fertile sts simple, soon withering.

**E. ARVENSE** L.

Horsetail sterile sts g, rather slender, 1-2° hl, 6-19-furrowed; branches num, long, mostly simple, 4-angled, minutely roughened, lowest joint com longer than sheath of st; fertile sts 4-10° hl, light brown, the loose scarious sheath mostly distant, w'ish, ending in about 12 brown acuminate teeth; spike rarely over 1' long. Va to Cal; Greenland. Synonym: *E. boreale* Bong.

**E: TELMATEIA** Ehrh. B 2:330.

Sterile sts ivory w or g'ish, stout, 2-6° hl, 20-40-furrowed; branches very num, erect-spreading, simple, 4-5-angled, the ridges rough and sulcate, lowest joint shorter than sheath of st; fertile sts 10-15° hl, w, many-furrowed, the loose brownish sheaths elongate, deeply 20-30-toothed. Cal; Ore; north. Synonyms: *E. fluviatile* Sm.—*E. eburneum* Schreb.—*E. maximum* Und. not Lam.

II.—Fertile sts when older producing herbaceous branches, only the naked apex withering.

**E: PRATENSE** Ehrh.

Sterile and finally fertile sts producing straight, simple branches; sheaths of st with about 11 short, ovate-lanceolate teeth, those of branches 3-toothed. Mich; Wis; north. Synonyms: *E. umbrosum* Willd.—*E. triquetrum* Bory.—*E. Drummondii* Hooker.

**E: SILVATICUM** L.

Sterile and fertile sts com 12-furrowed,

producing compound branches, branchlets curved downward; sheaths loose, those of st with 8-14 bluntish teeth, those of branches with 4-5, of branchlets with 3 divergent teeth. Va; Mich; Labrador.

\*\*Sts of 1 kind, herbaceous; branches simple or o; fr'ng in summer.

I.—Sheaths somewhat loose.

**E: PALUSTRE** L.

Sts slender, 10-18° hl, very deeply 5-9-grooved, the grooves separated by narrow, wing-like ridges, roughish; sheaths with about 8 loose-awl-shaped, whitish margined teeth; branches few in a whorl, with mostly 5-toothed sheaths. NY; Wis; BC; north. Synonym: *E. pratense* Reicheub.

**E: LITORALE** Kuhl.

Sts slightly roughened, 6-19-grooved, the carinae convex; sheaths sensibly dilated above, the uppermost bell-shaped; lvs convex, angled beneath, separate at the commissural groove; teeth herbaceous, membranous at margin, narrow, lanceolate; branches of 2 kinds, the 4-angled hollow, the 3-angled solid, first joint a little longer or shorter than sheath of st; spores abortive, elaters com o. Bay of Quinte, Canada (Macoun); Vt (Pringle); Oswego river, NY (Wibbe).

II.—Sheaths appressed.

**E: FLUVIATILE** L.

Sts 2-3° hl, slightly to many-furrowed, smooth, com producing upright branches after fructification; sheaths appressed, with about 18 dark brown, short, acute, rigid teeth; air-cavities o under the grooves, small under the ridges. Va to Wash; north. Synonyms: *E. limosum* L.—*E. uliginosum* Muhl.—*E. heleocharis* Ehrh.

Section **HIPPOCHAETE**. Sts per, ever-g; spikes tipped with a rigid point; stomata in regular rows; fr'ng in summer.

\*Sts tall and stout, com many-grooved.

I.—Branches num, regularly whorled.

**E: RAMOSISSIMUM** Desf.

Sts grooved, more or less roughened, 6-26-furrowed; sheaths dilated, toothed; teeth not grooved, persistent or decid, leaving only a triangular, very rarely a truncated margin; lvs more or less distinct, 3-4-carinate; branches, when present, 4-9-angled; series of stomata in 1-4 lines; inner bark of ridges higher than grooves; ridges convex, marked with bands, never with 2-rowed tubercles. Cuba; Mexico; B C.

II.—Branches few and irregular or wholly 0.

**E: ROBUSTUM** A. Braun. B 2:330.

Sts 3-11° hl, sometimes nearly 1° thick, 20-48-furrowed; ridges roughened with a single series of transversely-oblong, siliceous tubercles; sheath short, cylindric, marked with black girdles at base, and at base of caducous teeth; ridges of sheaths tricarinate. O; La; Cal; north.

**E: HEMALE** L.

Scouring-rush. Sts 1-4° hl, rough, 8-34-furrowed; ridges with 2 indistinct lines of tubercles; sheaths rather long, cylindric, marked with 1 or 2 black girdles; ridges of sheath obscurely quadricarinate; teeth membranous soon decid.

NA in general.

**E: LAEVIGATUM** A. Br.

Sts not tuberculate, 1-5' hl, pale g. 14-30-furrowed; ridges almost smooth; sheaths elongate, enlarged upward, marked with a black girdle at base of the com decid w-margined teeth, and rarely also at base of sheath; ridges of sheath with a central carina and sometimes with faint short, lateral ones. NC; O; La; Cal; Ore.

\*Sts slender, tufted, 5-10-grooved.

**E: VARIEGATUM** Schleich.

Sts ascending, 6-18' long, com simple from a branched base, 5-10-furrowed; sheaths g. variegated with black above, teeth 5-10, tipped with a decid bristle; central air-cavity small. NH; Ill; Alk; Greenland.

**E: SCIRPOIDES** Michx.

Sts filiform, very num. 3-6' hl, flexuous and curving, mostly 6-furrowed, with acute ridges; sheaths 3-toothed, bristle-tips more persistent; central air-cavity 0. New England; Pa; Ill; north.

Order **LYCOPODIACEAE** Lindley.

**PSILOTON** R. Br.

Lvs minute, abortive; sporangia 3-celled; 4 mostly tropical species.

**P. TRIQUETRUM** Swz.

Sts erect 8-10' hl, triquetrous at base, many-times forked at apex; ultimate divisions triquetrous-winged; lvs remote, awl-shaped, less than 1" long; sporangia in spikes. Fla; SC. Synonyms: *P. Floridanum* Michx.—*P. dichotomum* Link.—*Bernhardia dichotoma* Willd.—*B. pedunculata* Desv.—*Lycopodium nudum* L.

**LYCOPODIUM** L.

Lvs well developed, in 4-many ranks; sporangia 1-celled. Near 100 species. Section **PLANANTHUS** Beauv. Sporangia borne in axils of lvs which are similar to those of sterile and fertile sts. \*Sporangia com 0 in axils of upper lvs; lvs dark g. shining, about 8-ranked.

**L: SELAGO** L.

Sts 3-6' hl, thick, rigid, erect, 2-3-times forked, forming a level-topped cluster; lvs elongate-lanceolate, mucronulate, entire or spinulose-denticulate, nerved above, convex below. NC; Mich; New England; Alk; Greenland. Synonyms: *L. recurvum* Kit.—*L. suberectum* Lowe.—*Plananthus selago* Beauv.

**L: LUCIDULUM** Michx.

Sts ascending, thick, 2-3-times forked, branches 6-12' hl; lvs widely spreading or reflexed, flat, one-nerved, acute, minutely toothed. NC, northward. Synonyms: *L. reflexum* Swz.—*L. serratum* Desv.—*Plananthus reflexus* Beauv.

\*Sporangia only in axils of upper lvs which form spikes; lvs many-ranked.

**L: INUNDATUM** L.

Sterile sts creeping, flaccid, forking; fertile sts erect, simple, 1-4' hl, bearing a short, thick spike; lvs lanceolate or lance-awl-shaped, acute, entire, soft, spreading or curved upward on prostrate sts. New England; Mich; southward. Synonyms: *L. palustre* Lam.—*Plananthus inundatus* Beauv.

Variety **PINNATUM** Chapm.

Sts pinnately branched; lvs bristly-fringed below middle, unequal, the upper and lower shorter and somewhat

appressed, the lateral widely spreading; fertile sts 1' hl, very leafy; spike thick, cylindric, 2-3' long. Western Fla.

Variety **BIGELOVII** Tuckerm.

A form having fertile sts 5-7' hl, with more pointed, often tooth-bearing lvs. Synonym: *L. Carolinianum* Bigel.

**L: ALOPECUROIDES** L.

Sts stout, densely lfy thruout; sterile branches flaccid, procumbent, creeping; fertile branches rigid, erect, 6-20' hl, bearing a single spike; lvs narrowly linear-awl-shaped, spinulose-pointed, spreading, conspicuously bristle-toothed below the middle, nerved above, those of the cylindric spike with long, setaceous tips. NJ to Fla; Miss. Synonyms: *L. longipes* H. & G.—*Plananthus alopecuroides* Beauv.

Section **EULYCOPODIUM** (Lepidotis Beauv.). Sporangia borne in the axils of yellowish, scale-like, imbricated, ovate or cordate lvs which form a distinct spike; lvs of sterile branches very unlike those of the spikes.

\*Sts lfy to base of spikes, or nearly so.

I.—Spikes nodding.

**L: CERNUUM** L.

Sts erect, branching, branches similar; lvs crowded, awl-shaped, incurved, terete in middle, spreading, grooved below; bracts 8-ranked. Fla; Ala. Synonyms: *L. marianum* Willd.—*L. curvatum* Blume.—*L. Borganum* Richard.—*L. bryifolium* Vent.

II.—Spikes erect, closely sessile.

**L: ANNOTINUM** L.

Sts much branched, prostrate, creeping, 1-4' long; ascending branches similar, 5-8' hl, sparingly forked; lvs equal, spreading, 5-ranked, rigid, linear-lanceolate, minutely serrulate, nerved below; spike oblong, cylindric, thick. New England; NJ; Wash; Alk; Greenland. Synonyms: *L. juniperifolium* Lam.—*L. bryophyllum* Presl.—*Lepidotis annotina* Beauv.

Variety **PUNGENS** Desv.

A mt form with shorter and more rigid, pointed lvs. Synonym: *L. reclinatum* Michx.

**L: OBSCURUM** L.

Ground-pine. Sts erect, 6-9' hl, from a subterranean creeping rstock, densely branched above, the crowded branches spreading fan-like; lvs 4-6-ranked, lanceolate-linear, acute, entire; spikes 4-10 on each plant; bracts many-rowed. Canada; NC; Ind; Mich. Synonym: *Lepidotis dendroidea* Beauv.—*Lycopodium dendroideum* et var. *obscurum*.

**L: ALPINUM** L.

Sts elongate, creeping, with ascending densely clustered branches; lvs 4-ranked, erect, imbricated, adnate-decurrent, of 2 forms; those of lateral rows lanceolate, falcate, acute, carinate, concave within; those of intermediate rows scarcely 1-third smaller, lance-awl-shaped, the upper and lower rows not different. Lake Superior; Rocky Mts; Wash; Alk.

III.—Spikes erect, short-peduncled.

**L: SABINAEPOLIUM** Willd.

Ground-fir, sts elongate, creeping, com underground; branches erect, short, dichotomous, clustered; lvs 4-rowed, small,



appressed, lanceolate, mucronate, entire, apparently terete; spikes cylindric, solitary, with cordate, acuminate bracts. NY; NJ; north and west. Synonyms: *L. alpinum* Michx.—*L. armatum* Desv. \*\*Fertile branches with minute lvs, so that the spikes appear long-peduncled.

I.—Lvs uniform, many-ranked; sts terete.

#### **L: CLAVATUM L.**

Running-pine. Sts extensively creeping; branches similar, ascending, short and lfy, the fertile terminated by a slender peduncle bearing 1-4 linear, cylindric spikes; lvs much-crowded, linear-awl-shaped, tipped like bracts with a fine bristle. Canada; NC; Wash; Alk. Synonyms: *L. officinale* Neck.—*L. vulgare* Vaill.—*L. inflexum* Swz.—*L. serpens* Presl.—*Lepidotis inflexa* Beauv.

II.—Lvs of 2 forms, few-ranked; sts flattened.

#### **L: CAROLINIANUM L.**

Sterile sts and their few short branches entirely creeping; lateral lvs broadly lanceolate, acute, and somewhat oblique, 1-nerved, widely spreading in 2-ranks; upper row of lvs shorter, appressed; peduncle simple, slender, 2-4' hi, clothed with small bract-like lvs, bearing a single cylindric spike. NJ; Fla; Ala; La. Synonyms: *L. repens* Swz.—*L. affine* Bory.—*Lepidotis repens* Beauv.

#### **L: COMPLANATUM L.**

Sts extensively creeping, with erect or ascending fan-like branches several times forked above; branchlets crowded, flattened; lvs minute, imbricate-appressed, 4-ranked; lateral rows with somewhat spreading tips; intermediate smaller, narrower, wholly appressed; peduncle slender, bearing 2-4 cylindric spikes. New England; NC; Mich; northward. Synonyms: *L. thyroides* Humb & Bonpl.—*L. tristachyon* Pursh.—*L. anceps* Walls.—*L. chamaecyparissus* A. Br.—*Lepidotis complanata* Beauv.—Some botanists unite *Lycopodium alpinum* L. and *L. sabinaefolium* with this species.

Descriptions of the following species have not been seen by the writer.

**L: ADPRESSUM** (Chapm) Lloyd and Underwood.

**L: CHAMAECYPARISSUS** A. Br.

**L: PINNATUM** (Chapm) Lloyd and Underwood.

Based on *L. inundatum pinnatum*?

**L: POROPHILUM** Lloyd and Underwood.

**L: SITCHENSE** Rupr.

### **ISOETACEAE.**

Genus **ISOETES** Linnaeus.

Quillwort. About 50 species.

Section I. Submerged, rarely above water in driest seasons; lvs quadrangular, without peripheral bast-bundles; velum incomplete.

\*Stimata absent.

#### **I: LACUSTRIS L.**

Lvs 10-25, stout, rather rigid, obtusely quadrangular, acute but scarcely tapering, dark or olive-g, 2-6' long; sporangia orbicular—broadly-elliptic, with a narrow velum; ligula triangular, short or

somewhat elongate; macrospores 0.5-0.8 mm in diam, marked all over with distinct or somewhat confluent crests; microspores smooth, 0.035—0.046 mm long. NY; NH; Mass; Vt.

Variety **FAUPERCULA** Engelm.

Lvs fewer, shorter, thinner; spores smaller, microspores somewhat granulate, 0.026-0.036 mm long. Synonym: *I. macrospora* Durien. Grand Lake, Middle Park, Colo (Engelmann); Castle Lake, near Mt Shasta, Cal (Pringle).

**I: PYGMAEA** E. B2:351.

Lvs 5-10, stout, rigid, bright g, 1/2-1' long, abruptly tapering to a fine point, with very short often almost square epidermal cells; sporangia orbicular with a narrow velum; macrospores 0.36-0.5 mm thick, marked with minute, rather regular, distinct or rarely confluent warts; microspores brown, almost smooth, 0.024-0.029 mm long. Mon Pass, Cal. (Bolander).

**I: TUCKERMANI** A. Br.

Lvs 10-30, very slender, tapering, olive g, 2-3' long, outer recurved; sporangia mostly oblong, w or rarely brown-spotted, upper third covered by the velum; macrospores 4.44-0.56 mm thick, the upper segs marked with prominent, somewhat parallel and branching ridges, lower half reticulate; microspores smooth or nearly so, 0.026-0.032 mm long. Mass.

**I: ECHINOSPOREA** Durien, Soc bot Fr b 8:164.

One of the smaller species, with 10-30 or 40 soft bright g or sometimes r'ish lvs, gradually and regularly tapering from a thick base to a very slender elongated point absolutely without stomata, 2-4 or sometimes 5' long; sporangia orbicular to broadly oval, unspotted with a narrow, erect, truncate, or slightly forked spinules; microspores 0.03-0.034 mm long, almost smooth. Italy, France, Germany, England, Lapland, Iceland, apparently not in America. \*\*Stomata present.

Variety **BRAUNII** E, St. Louis ac tr 4:379 (1882).

Rather small, with 13-15 g or r'ish-g, erect or spreading, rather short (3-6' long), tapering soft lvs, generally with few stomata towards the tip only; sporangia orbicular to broadly elliptical, spotted, generally 1/2 or even 3/4 covered by a broad velum; macrospores 0.4-0.5 mm thick, rather a little longer, covered with broad, retuse spinules, sometimes somewhat confluent, and then dentate or incised at tip; microspores 0.026-0.03 mm long, smooth. Nova Scotia; New England; Pa; Mich; Utah; Greenland. Synonym: *I. Braunii* Durien, Soc bot Fr b 11:101.

Variety **ROBUSTA** Engelm.

Similar to var. *Braunii*, but much stouter, with 25-70 lvs, 5-8' long, with abundant stomata all over their surface; velum covering about 1/2 of the large, spotted sporangium; macrospores 0.36-0.55 mm thick, with the sculpture and microspores the same as of var. *Braunii*. North end of Isle of La Motte, Lake Champlain (C. G. Pringle).

Variety **BOOTTII** Engelm.

Lvs erect, soft, bright g, fewer (12-20) short (4-5' long); stomata mostly few, near the tip; sporangia nearly orbicular, pale-spotted, two-thirds or more covered by the broad velum; macrospores 0.39-0.5 mm thick, with longer and slender, delicate, generally simple spinules; microspores 0.026-0.03 mm long. Mass (Boott). Synonym: *I. Boottii* A. Braun in litt.

Variety **MURICATA** Engelm.

Lvs (15-20) long (6-12'), flaccid, bright g, with very few stomata; sporangium broadly oval, pale-spotted, about  $\frac{1}{2}$  covered by velum; macrospores 0.4-0.58 mm thick, with shorter and more confluent, therefore sometimes almost crest-like spinules; macrospores slightly rough on the edges, 0.028-0.032 mm long. Near Boston, Mass (Boott). Synonym: *I. muricata* Durien, Soc Bot Fr b 11:101. **I. BOLANDERI** E, Am nat 8:214. B2:350, Und Z 1:98 SBer mts. 101 Brit Am.

One of the smaller species, with erect, soft, bright g lvs tapering to a fine point, 5-20 or 25 in number, 2-4  $\frac{1}{2}$ ' long, with thin walls and partitions, and generally not many stomata; sporangium broadly oblong, mostly without any spots, with a narrow velum; ligula triangular; macrospores 0.3-0.4 or rarely 0.45 mm thick, marked with minute low tubercles or warts, rarely confluent to wrinkles; microspores 0.026-0.031 mm long, generally spinulose; rarely, in the Rocky Mt form, smooth, deep brown. Colo; Ut; Wash. Synonym: *I. California* E, ex G, Man (nomen nudum).

Section II.—Amphibious, partially emerged, submerged only in the earlier period of their growth or temporarily; stomata always present.

\*Peripheral bast-bundles 0.

I.—Velum partial.

**I. SACCHARATA** Engelm., Gray's Man, ed 5, 676 (1868).

Plant small, com with a flat, depressed trunk; lvs subulate, olive-g, spreading, 10-20 in number, 2-3' long; sporangium oblong, spotted, with a narrow velum; ligula triangular; macrospores 0.4-0.47 mm thick, covered with very minute distinct or sometimes a little confluent warts; microspores papillose, 0.024-0.028 mm long. Md Canby).

**I. RIPARIA** Engelm.

Lvs 15-30, slender, rather rigid, deep g, 4-8' long, with num stomata; sporangia mostly oblong, distinctly brown-spotted, 1-fourth or 1-third covered by the velum; macrospores 0.45-0.65 mm thick, marked with isolated or anastomosing, jagged crests; microspores more or less tuberculate, 0.028-0.032 mm long. mm long. Md; (Canby).

II.—Velum complete.

**I. MELANOSPORA** Engelm., St. Louis ac tr 3:395, note.

One of the smallest species, with a flat, only slightly bilobed trunk; lvs few (5-10, 2-2  $\frac{1}{2}$ ' long), distichous, slender, tapering, light g, spreading; sporangium orbicular or almost obcordate,  $\frac{1}{2}$ -1' lg, entirely covered by the velum, unspotted; ligula short-triangular, obtuse, or about semi-orbicular; microspores 0.35-0.45 mm in diam, roughened with distinct or rare-

ly somewhat confluent warts, dark-colored; microspores 0.028-0.031 mm long, smoother or slightly papillose. Stone Mt, Ga.

\*\*Peripheral bast bundles present.

I.—Velum partial.

**I. ENGELMANNI** A. Braun, A 1:33.

Lvs 25-100, light g, 9-20' long or more, with abundant stomata; sporangia oblong to linear-oblong, unspotted; velum narrow; ligula elongated from a triangular base; macrospores 0.4-0.52 mm thick, delicately honeycomb-reticulated; microspores 0.024-0.028 mm long, generally smooth. New England; NY; Mo; Ill.

Variety **GRACILIS** E, Ex G, Man, ed 5, 676.

Often submerged, lvs 8-12, 9-12' lg; bast-bundles oft quite sm, or only 2. New England; NJ.

Variety **VALIDA** E, Ex G, Man, ed 5, 676.

Lvs 50-100 or even 200, 18-25' lg, keeled on upper side; sporangia oft linear-oblong (4.9' lg), 1-third or oft  $\frac{1}{2}$  or even 2-third covered by the broad velum; macrospores rather smaller, 0.32-0.48 mm thick; microspores 0.024-0.027 mm lg, spinulose, Pa; Dela. Variety **GEORGIANA** Engelm.

Similar to type; lvs few (15), 10-12' long, rather slender; oval sporangium with narrow velum; macrospores 0.48-0.56 mm thick; microspores 0.028-0.031 mm long, smooth. Ga.

**I. HOWELLI** Engelm.

Middle-sized, lvs (10-25) bright g (5-8' long) with thick dissepiments; sporangium oval (1  $\frac{1}{2}$ -2  $\frac{1}{2}$ ' long), unspotted,  $\frac{1}{4}$ - $\frac{1}{2}$  covered by velum; subulate ligula as long as sporangium; macrospores 0.43-0.48 mm in diam, rough, with prominent rounded single or sometimes confluent tubercles. Ore. Synonyms: *I. nuda* Engelm.—*I. Underwoodii* (fide Heller).

**I. NUDA** Engelm.

Lvs 10-15, bright g, 6-9' long; sporangia oval, light-brown, attached to base of lvs by median line only, velum entirely 0; ligula somewhat triangular; macrospores 0.366-0.4 mm thick, slightly tuberculate, tubercles somewhat confluent. Hood river, Ore (Howell).

II.—Velum complete.

**I. FLACCIDA** Shuttleworth.

Lvs 10-35, bright g, 15'-2° long, submerged, floating on the surface, or wholly emerged; sporangia oval, 2-3' long, entirely covered by velum; macrospores 0.3-0.42 mm thick, covered with many or rarely few, large flattish tubercles, distinct, or confluent into labyrinthiform wrinkles. Fla.

Variety **RIGIDA** Engelm.

A smaller form with still more slender, erect, dark g lvs (about 10-15 in number, 5-6' long). Lake Flint, Fla (A. P. Garber).

Variety **CHAPMANI** Engelm.

Lvs about 30, floating, 18' long; sporangia orbicular; macrospores 0.44-0.55 mm thick, almost smooth on upper side; microspores slightly papillose, 0.027-0.03 mm long. Near Mariana, Fla (Chapman).



Section III.—Terrestrial species, maturing entirely out of water, with abundant stomata and peripheral bast-bundles, thick dissegments, and small air-cavities in the nearly triangular lvs.

\*Trunk bilobed.

1.—Velum partial or almost wanting.

**ISOETES MELANOPODA** J. Gay.

Al:32d.

Variety **CALIFORNICA** A. A. Eaton.

Al:32 fdr.

Variety **PALLIDA** Engelm.

Al:32 fdr.

**I: MAELITIMA** Underwood.

Monocleous; trunk sm, only slightly bilobed; lvs 8-15, rigid, g.  $\frac{1}{2}$ ' long,  $\frac{1}{2}$  to 2-thirds li wide; sporangia oval, 2" lg,  $1\frac{1}{4}$ " wide, brownish w, 1-third to  $\frac{1}{2}$  covered by velum; ligule small; macrospores 0.42-0.48 mm thick, densely spinulose, the spines blunt, rarely confluent; microspores smooth, w, 0.32-0.35 mm thick. In salt marsh, Alberni, Vancouver Island (Macoun).

**I: BUTLERI** Engelm.

Diocleous; trunk sub-globose; lvs 8-12, rigid, bright g, 3-7' long; sporangia com oblong, spotted, with a very narrow velum or none; ligula awl-shaped from a triangular base; macrospores 0.5-0.63 mm thick, marked with knobs or warts, distinct or sometimes confluent; microspores papillose, dark brown, 0.028-0.38 mm long. "In saline flats, near Limestone Gap, Indian Territory."

Variety **IMMACULATA** Engelm.

Larger, with unspotted sporangia, and spinulose microspores, the macrospores 0.4-0.56 mm. Cedar barrens near Nashville, Tenn (Gattinger).

II.—Velum complete.

**I: NUTTALLII** A. Braun. B2:351.

Trunk almost globose, slightly grooved; lvs 20-60, slender, bright g, 3-9' lg, with only 3 peripheral bast-bundles; sporangia oblong or oval, entirely covered by velum; macrospores variable, 0.25-0.5 mm thick, densely covered with minute but rounded warts, or rarely almost smooth; microspores papillose, brown, 0.025-0.028 mm long. Ore; Wash; Idaho; Vancouver Island. Synonym: I. opaca Nuttall.

\*Trunk trilobed; velum complete.

**I: SUKSDORFII** Baker.

Lvs 12-20, firm, bright g, very slender, arcuate, deeply channelled, along the face, 2-3' long, less than  $\frac{1}{2}$ " wide; sporangia orbicular, 2" long and broad; ligula deltoid; macrospores grayish-w, faintly granulated. Wash (Suksdorf).

Other species of Isoetes within our region are the following, of which descriptions have not been seen by the writer, except as noted.

**ISOETES MEXICANA** Underw.

Und, bot gaz 13:93, Chili; Z 1:98, 99, 101, Al:31d.

**I: DODGEI** A. A. Eaton.

**I: EATONI** Dodge.

**I: FOVEOLATA** A. A. Eaton.

**I: MACGOWNII** A. A. Eaton.

**I: MINIMA** A. A. Eaton.

**ISOETES ORCUTTII** A. A. Eaton.

Al:33 fdr.

Species not American, but cited in our literature.

**I. GARDNERIANA** A 1:34.

**I. GUNNII** A 1:34.

**I. HOOKERI** A 1:34.

**I. HOWELLII** A 1:33.

**I. MULLERI** A 1:34.

**I. NIGRITANA** A 1:34.

**I. SACCHARATA** E. Parry Wyo 24.

**I. STUARTI** A 1:34.

**I. WELWITSCHII** A 1:34.

## SELAGINELLACEAE.

**SELAGINELLA** Beauv.

The only genus known in the order, largely tropical, containing over 300 species.

A 1:380d.

Section **EUSELAGINELLA**. St lvs of 1 kind, many-ranked; bracts uniform.

\*Sts prostrate or spreading, somewhat rigid.

**S. RUPESTRIS** Spreng. B 2:350. Da 20.

Br 1:205 Cruz. A 1:380d.

Al:380d.

Sts densely tufted, prostrate or ascending, much-branched, 2-12' long; lvs appressed-imbriate, linear to linear-lanceolate, convex and sulcate dorsally, rigid, bristle-tipped, ciliate; spikes strongly quadrangular, 6-12" long; sporangia of both sorts in the same axils; macrosporangia abundant; bracts ovate-lanceolate. New England to Fla; Texas; Cal; north. Synonyms: *Lycopodium rupestre* L.—*L. bryopteris* Wall.

Variety **TORTILIA** Underwood.

Lvs sub-entire, gibbous dorsally near apex; terminal bracts tipped with a long, twisted, w awn; macrospores loosely reticulate. NC; SC.

Variety **FENDLERI** Underwood.

Description not seen.

**S: SELAGINOIDES** Link.

Sterile sts prostrate or creeping, small and slender; fertile sts thicker, ascending, simple, 1-3' hi; lvs lanceolate, acute, spreading, sparsely spinulose-ciliate; bracts lax, ascending, lanceolate or ovate-lanceolate, strongly ciliate. Greenland; NH to Colo. Synonyms: *S. spinosa* Beauv.—*Lycopodium selaginoides* L.—*L. ciliatum* Lam.

\*\*Sts pendent, flaccid.

**S. OREGANA** Eaton. B 2:350.

Sts 1-6' long, pinnately much branched; lvs loosely imbricate, scarcely 1" lg, linear-lanceolate, convex and grooved on back, acute, sparsely spinulose-denticulate, not bristle-tipped; spikes quadrangular, very slender; macrosporangia scarce. Ore.

Section **STACHYGYNANDRUM** Baker. St lvs of 2 kinds, spreading in 2 planes, those of upper plane smaller and more ascending; bracts uniform.

\*Main sts decumbent; rt fibres extending to upper nodes.

I.—Sts persistent; lvs rigid, firm in texture.

**S. DOUGLASSII** Spring. B 2:350.

Sts decumbent, 3-12' long; branches 2-6' long, bi-tri-pinnately divided; lvs of lower plane 1" long, obliquely oval, obtuse, faintly nerved; lvs of upper plane  $\frac{1}{2}$  as long, oval, incurved, ending in a

short point, both sparingly ciliate at base; spikes 6-12" long, quadrangular, terminal; bracts deltoid-cuspidate, strongly imbricate. Cal; BC. Synonyms: *Lycopodium Douglasii* H & G.—*L. ovalifolium* H & G.

II.—Sts mostly ann, fugacious; lvs mostly membranous, flaccid.

**S: APUS** Spring.

Sts 1-4' long, slender, angled on face, prostrate, creeping, much branched flaccid; lvs of lower plane spreading above, lower reflexed, ovate, acute, serrulate, not distinctly ciliate; lvs of upper plane ovate, shortly cuspidate; spikes 3-6" lg; bracts ovate, acute, membranous, strongly serrulate, acutely keeled in upper half. Canada; Rocky Mts; Fla; Texas.

**S: LUDOVICIANA** A. Br.

Sts slender, copiously pinnate, flat on both sides, 4-6' long, lower branches slightly compound; lvs of lower plane rather distant except at tips of branches, spreading, ovate-oblong, subacute, firmer in texture than in *S. apus*, serrulate, not distinctly ciliate; lvs of upper plane  $\frac{1}{2}$  as long, obliquely oblong, cuspidate; spikes 3-6" long; bracts ovate-lanceolate, strongly keeled. La; Fla. Synonym: *S. apus denticulata* Spring.

\*\*Sts densely tufted, rolling into a nest-like ball when dry; sts confined to base of sts.

**S. LEPIDOPHYLLA** Spring. Baja. Ar. B 2350.

Sts 2-4' long, densely tufted, pinnately branched to base, pinnae ascending, subflabellately compound; lvs of lower plane closely imbricate, ascending, obliquely ovate, obtuse, thick, rigid, minutely ciliate, g above, paler below, becoming r'ish-brown in age; lvs of upper plane nearly as long, obliquely ovate, obtuse; spikes 3-6" long, quadrangular; bracts deltoid, acutely keeled. Tex; Arizona; Cal?

**S: PILIFERA** A. Braun.

Primary branching varies from flabellate to pinnate, lvs cuspidate and serrulate. Mexico; Texas?

Descriptions of the following have not been seen by the writer.

**S: ARENICOLA** Underwood.

**S: BRYOIDES** (Nuttall) Underwood.

Synonym: *S. cinerascens* A. A. Eaton.

**S: MUTICA** D. C. Eaton.

**S: FRINGLEI** Baker.

**S: RUFIN COLA** Underwood.

**S: STRUTHIOLOIDES** (Presl) Underwood.

**S: TORTIFILA** A. Br.

#### Order **FILICES** Juss.

A large order of 70 to more than 200 genera (according to different botanists), and 3000 or more species. It contains six well-marked sub-orders (considered as orders by some recent authors).

Sub-order **OSMUNDACEAE** R. Br.

Sporangia naked, globose, mostly pedicelled, with no ring or mere traces of one around apex, opening into halves by a longitudinal slit.

#### **OSMUNDA** L.

Fertile fronds or fertile portions very much contracted, bearing short-pedicelled, naked sporangia on the margin of the rachis-like divisions. Sporangia large, globular, opening by a longitudinal cleft into halves, bearing near apex a few parallel striae, the rudiment of a transverse ring. Spores g. Named for Osmunder, a Saxon name for the divinity Thor. Six species, mostly north temperate.

\*Fronds bipinnate, fertile at apex.

**O: REGALIS** L.

Canada to Fla; Miss. Synonyms: *O. spectabilis* Willd.—*O. glaucescens* Link.

\*Sterile fronds bipinnatifid.

**O: CLAYTONIANA** L.

Stipes tufted, 1° or more long, clothed with loose woolly tomentum when young, naked when mature; fronds 1-2° long, 8-12' broad; pinnae oblong-lanceolate with oblong, obtuse divisions; 2-5 pairs of central pinnae fertile, fertile pinnules dense, cylindrical; texture herbaceous. Canada; Ky; northward. Synonym: *O. interrupta* Michx.

**O: CINNAMOMEA** L.

Cinnamon-fern. Stipes densely tufted, 1° or more long, sterile and fertile fronds distinct, clothed when young with ferruginous tomentum; sterile fronds smooth when mature, the pinnae bearing a tuft of tomentum at base beneath, lanceolate, cut into broadly oblong, obtuse divisions; fertile fronds contracted, bipinnate, with cinnamon-colored sporangia. New England; Wis; Fla. Synonym: *O. claytoniana* Conrad.

Variety **FRONDOSA** Gray.

Fronds in part sterile below, sparsely fertile at summit.

Sub-order **HYMENOPHYLLACEAE** Endl.

Sporangia borne on an elongate, often filiform, receptacle, surrounded by a complete transverse ring, opening vertically. Sori terminal or marginal from the apex of a vein. Indusium inferior, com of same texture as frond. Fronds delicately membranous and pellucid.

**TEICHOMANES** Sm.

Indusia tubular, cup-shaped, or funnel-shaped, sometimes 2-lipped. Filmy fern. Near 100 species, of the tropics.

Section **EUTRICHOMANES**

**T: PETERSII** Gray.

Stipes 1-2" long; fronds 3-10" long, 1-2" broad, oblong-lanceolate or obovate, entire or variously pinnatifid, the younger ones with a few black hairs along the margins; indusium solitary, terminal, funnel-shaped, the mouth expanded and slightly 2-lipped, the receptacle included. Winston Co, Colo (Peters).

**T: RADICANS** Swz.

Rtstock wiry, tomentose; stripes ascending, 1-3' long, naked or nearly so, com broadly winged; fronds 2-3' long, 1-1½" wide, lanceolate or ovate lanceolate, bipinnatifid; pinnae ovate, obtuse, upper side of base parallel and appressed to the winged rachis, lower side cuneate; divisions toothed or divided into linear lobes; indusia terminal on short lobes, tubular or funnel-shaped, the mouth slightly 2-lipped; receptacle



exserted little or very much. Ala; Tenn; Ky. Synonym: *T. speciosum* Willd.

Sub-order **SCHIZAEACEAE** Presl.  
Sporangia ovate, sessile, arranged in spikes or panicles, having a complete, transverse, articulated ring at apex, and opening by a longitudinal slit.

**LYGODIUM** Swz.  
Sts scandent. Sporangia borne in a double row on narrow fertile segs, each on a separate veinlet and provided with a special indusium. Includes 16 species.  
**L. PALMATUM** Swz. Climbing-fern.

Mass; NY; Ky; Fla. Synonym: *Hydroglossum palmatum* Willd.  
**ORNITHOPTERIS** (Anelmia Swz.).

Sts not scandent. Sporangia naked, attached by their bases to the narrow divisions of the paniced fertile segs of frond. Near 30 species, chiefly tropical.  
**O. ADIANTIFOLIA** Bernh.

Rtstock creeping; stipes 1-1½' lg, firm, naked; fronds sparingly pubescent, the 2 lower branches elongate, pinnately decomposed, fertile; sterile portion deltoid-ovate, bi-tri-pinnate; ultimate seg obovate or cuneate, entire or lobed, striate above with num flabellate veins. Fla. Synonym: *Anelmia adiantifolia* Swz.

**O. MEXICANA** Underwood.

Rtstock creeping, covered with narrow blackish chaff; stipes slender, scattered, 6-12' long; the 2 lower branches of frond fertile, long-stalked, glandular, bi-pinnate with densely clustered fructification; the rest of the frond like the sterile ones, deltoid-ovate, simply pinnate; pinnae about 6 pairs and a rather large terminal one, short-stalked, ovate-lanceolate, subcoriaceous, smooth and somewhat glossy; midrib distinct, veins free, oblique, parallel, closely placed, once or twice forked. Western Texas. Synonym: *Anelmia Mexicana* Klotzsch.  
**SCHIZAEA** Sm.

Sts not scandent. Sporangia naked, fixed in a double row to the midrib of the narrow fertile segs. Sterile fronds simple or dichotomously forked. Includes 16 species.

**S. FUSILLA** Pursh.

Sterile fronds linear, very slender, flattened and tortuous; fertile ones equally slender, 3-4' hi, and bearing at top the fertile appendage consisting of about 5 pairs of crowded pinnae, forming a distichous spike. NJ; Nova Scotia; Newfoundland.

Sub-order **POLYPODIACEAE** Presl, Tent Pterid 167 (1836).

Sporangia pedicelled, surrounded more or less completely by a jointed vertical, and elastic ring, bursting transversely. Sori dorsal or marginal, borne on a leafy frond, with or without indusia.

Tribe **ACROSTICHEAE**. Sporangia spread in a stratum over the under surface, or rarely over both surfaces of frond; indusia 0.

**ACROSTICHUM** L. sp Pl 1067 (1753).

Sori covering entire surface of upper pinnae. Near 200 species.

**A. AUREUM** L. Sp Pl 1069 (1753).

Stipes 1-2° long, tufted, strong, erect,

glossy; fronds 2-6° long, 1-2° broad, upper pinnae fertile, slightly smaller than the barren ones; texture coriaceous; areolae small, copious, without free veinlets. Southern Fla.

**A. LOMARIOIDES** Jenman, Bot Dept Jam b 11, 5:154 (1898).

Description not seen. Southern Fla. *Chrysodium lomarioides*, Jenm, Timehri 4:314 (1885).

Tribe **POLYPODIEAE**. Sori dorsal, borne at or near ends of veinlets, indusia 0.

**POLYPODIUM** L.

Sp Pl 1082 (1753).

Characters of the tribe, as formerly treated; 350 or more species. Sections *Phlebodium*, *Campyloneuron* and *Phymatodes* are considered as distinct genera by recent writers.

Section **EUPOLYPODIUM**. Veins free; fronds in one species pinnate.

\*Sori Large.

**P. VULGARE** L.

Stipes 2-4' long, firm, erect; fronds 4-10' long, 1-3' broad, cut nearly or quite to rachis into entire or slightly toothed, com blunt pinnae; veins once or twice forked. New England; Ore; Ala. Variety **OCCIDENTALE** Hooker.

Fronds larger, pinnae sharply serrated, long-pointed.

**P. FALCATUM** Kellogg.

Stipes 5-8' long, stramineous; fronds 12-15' long, 4-8' broad; pinnae num, tapering to a slender point, sharply serrate; sori nearest midrib; veins with 2-4 veinlets. Cal; Wash. Synonym: *P. glycyrrhiza* D. C. Eaton.

\*\*Sori smaller, often minute.

**P. PLUMULA** H B K.

Stipes 1-4' long, bk, slender; fronds narrowly lanceolate, 9-18' long, 1-2' broad; pinnae num, narrow, entire, blunt, lower gradually reduced; surfaces naked except the bk wiry rachis; veinlets forked, obscure. Fla. Synonym: *P. elasticum* Rich.

**P. PECTINATUM** L.

Stipes rigid, 2-6' long; fronds elliptical-lanceolate, 1-2½' long, 2-6' broad, cut to rachis into horizontal, entire or toothed pinnae, lower ones much reduced; rachis naked or finely villose; veinlets pellucid, once or twice forked; sori in long rows, of medium size. Fla.

Section **GONIOPHLEBIUM** Blume. Veins forming ample regular areolae (sometimes almost imperceptible), each with a single distinct free included veinlet, bearing a sorus at its terminus.

\*Under surface squamous.

**P. INCANUM** Swz.

Rtstock woody, wide creeping, covered with small brown scales; stipes 1-4' lg, erect, densely scaly; fronds 2-6' long, 1-1½' broad, cut to rachis into entire pinnae; texture coriaceous; sori small; veins indistinct, united or frequently free. Va; Ill; southward.

**P. THYSANOLEPIS** A. Br.

Rtstock slender, firm, densely covered with minute lanceolate scales; stripes 3-12' long, erect, scaly; fronds ovate, 3-9' long, 2-3' broad; pinnae distinct, ascending, blunt, dilated at base (except lowest), thick, subcoriaceous, covered below

with ciliate scales with brown center and broad scarious border; areolae and sori in one series. Huachuca mts, Ariz; Mexico.

\*\*Under surface mostly smooth.

**P: CALIFORNICUM** Kaulf, B 2:334.

Rtstock creeping, chaffy; stipes 2-6' long, stramineous when dry, naked; fronds ovate to oblong-lanceolate, 4-9' long, 1-5' broad, cut nearly or quite to midrib into finely-toothed pinnae; texture papyraceo-herbaceous; sori large; veinlets 4-6 to each vein. Cal; Baja. Synonym: *P. intermedium* H. & A.

**P: SCOULEI** H. & A.

Rtstock stout, creeping, scaly; stipes 2-4' long, erect, naked; fronds thick, 3-12' long, 2-6' broad, cut down to rachis into from 5-29 close, blunt pinnae; texture coriaceous, fleshy when recent; sori very large; veinlets regularly anastomosing forming a single series of large areolae. Cal; northward. Synonyms: *P. carnosum* Kellogg, *P. pachyphyllum* D. C. Eaton. Section **PELESODIUM** R. Br. Veins forming ample areolae, each with 2 or more distinct, free, included veinlets bearing sori on their united points.

**P: AUREUM** L. Sp Pl 1087 (1753).

See *Phlebodium aureum*.

Section **CAMPYLONEURON** Presl. Primary veins distinct from midrib to edge, connected by parallel transverse veinlets; areolae similar, containing 2 or more sori.

**P: PHYLLITIDIS** L. Sp Pl 1083 (1753).

See *Campyloneuron phyllitidis*.

Section **PHYMATODES** Presl. Areolae fine, copious, irregular, the free veinlets spreading in various directions; sori crenate in position.

**P: SWARTZII** Baker, in Hooker & Baker, Syn Fil ed 1, 357 (1868).

See *Phymatodes Swartzii*.

**PHLEBODIUM** J Sm, I Bot 4:58 (1842).

See *Polypodium*, section *Phlebodium*, for characters.

**P: AUREUM** J Sm, I Bot 4:59 (1842).

Rtstock stout, densely scaly; stipes 1-2' long, castaneous, naked; fronds 3-5' long, 9-18' broad, cut nearly to rachis into broad entire or slightly undulate pinnae; areolae copious. Fla. Synonym: *Polypodium aureum* L.

**CAMPYLONEURON** Presl, Tent Pterid 189 (1836).

See *Polypodium*, section *Campyloneuron*, for characters.

**C: PHYLLITIDIS** Presl, Tent Pterid 190 t 7 f 18 (1836).

Rtstock stout, scaly; stipes short or 0; fronds simple, 1-3' long, 1-4' broad, the point acute, lower part gradually narrowed; texture rigid, coriaceous, areolae in rows of 6-12 from midrib to edge. Fla. Synonym: *Polypodium phyllitidis* L.

**PHYMATODES** Presl, Tent Pterid 195 (1836).

See *Polypodium*, section *Phymatodes*, for characters.

**P: SWARTZII** Underwood, Our Native Ferns, ed 6, 84 (1900).

Rtstock wide creeping, slender, covered with linear ferruginous scales; stipes ½-1' long, slender, naked; frond simple, 2-4' long ¼ to ¾' broad, narrowed gradually toward both ends, edge entire, undulate,

or slightly lobed; sori uniserial on free veinlets. Key Largo, Fla (Curtiss). Synonyms: *Polypodium serpens* Swz.—*P. Swartzii* Baker.

Tribe **GRAMMITIDAE**. Sori dorsal, variously arising from the veins, com linear. *Indusia* 0.

**GYMNOPTERIS** Bernh, Schrad J Bot. 1799 1: 297 (1799).

Sori oblong or linear, following course of veinlets.

**G: HISPIDA** Underwood. Our Native Ferns, ed 6, 84 (1900).

Rtstock creeping; stipes grayish, puberulent, 3-6' long; fronds 5-angled, 1-3' each way, hispid above, tomentose beneath, pinnate; lower pinnae much the largest, unequally triangular, pinnate; upper pinnae lobed or crenate. Tex; Arizona. Synonym: *Gymnogramme hispida* Mett in Kuhn, *Linnaea* 36:72 (1869-70).

**G: TRIANGULARIS** Underwood. Our Native Ferns, ed 6, 84 (1900).

Slipes densely tufted, slender, blackish-brown, polished, 6-12' long; triangular, bipinnatifid; upper pinnae more or less pinnately lobed; lower surface covered with yellow or white powder, finally more or less obscured by the fr. Ariz; Baja; Cal; BC. Synonym: *Gymnogramme triangularis* Kaulf, Enum Fil 73 (1824).

#### Genus **NOTHOLAENA** R. Brown.

Sori on the veins or near their extremities, roundish or oblong, soon confluent into a narrow marginal band.

Section **EUNOTHOLAENA**. Fronds not farinose beneath, scaly, hairy or tomentose.

\*Fronds simply pinnate.

**N: SINUATA** Kaulf.

Rtstock short, thick, very chaffy; stipes 2-4' long, erect; fronds 6'-2" long, 1-2' broad; pinnae num, short-stalked, roundish or ovate, entire to pinnately lobed, lower surface densely scaly. Tex; Ariz.

**N: FERRUGINEA** Hooker.

Rtstock creeping, covered with dark rigid scales; tufted, 2-4' long, wiry, blackish, woolly at first; fronds 8-12' lg, ½-1' broad, narrowly lanceolate; pinnae num, ovate, pinnatifid, hairy above, densely tomentose beneath, the wool at first w'ish, but becoming ferruginous. Tex.—Ar. Synonym: *N. rufa* Presl.

\*\*Fronds bi-quadrupinnate.

I.—Fronds silky-hairy above.

**NOTHOLAENA PARRYI** Eaton.

Rtstock short, scaly, stipes 2-4' long, dark brown, pubescent with w'ish jointed hairs; fronds 2-4' long, oblong-lanceolate, tripinnate, lower pinnae distinct; seg crowded, roundish-obovate, 1' broad, densely covered above with entangled w hairs, beneath with a heavier pale-brown tomentum. Ut; Ar; CD; Baja!

**NOTHOLAENA NEWBERRYI** Eaton.

Rtstock with very narrow dark bristly scales; stipes tufted, 3-5' long, blackish-brown, woolly when young, with pale ferruginous tomentum; fronds 3-5' long, lanceolate-oblong, covered most densely beneath with fine w'ish hairs, tri-quadrupinnate; ultimate seg roundish-obovate, one-third to ½" broad. SD; Baja!

Cotton fern, Southern and Baja Cal.

II.—Fronds slightly hispid above.



**N: ASCHENBOENIANA** Klotzsch

Rtstock short, creeping; stipes tufted, 2-3' long, wiry, ebeneous, densely scaly; fronds 4-10' long, 2-3' broad, oblong-lanceolate, tripinnatifid; pinnae lanceolate, cut into linear-oblong, crenate or pinnatifid pinnules; upper surface pale g, the lower densely matted with linear, ciliate, bright ferruginous scales, beneath which it is subfarinose; sori black. Huachuca mts, Ar (Lemon); Texas (Drummond); Mex.

Section **CINCINALIS** Desv. Fronds farinose with w or y powder (in 1 sp naked).

\*Fronds farinose below.

I.—Fronds deltoid or pentagonal, barely bipinnate.

**N: CANDIDA** Hooker.

Rtstock creeping, with narrow, rigid, nearly black scales; stipes tufted, 3-6' long, wiry, black and shining; fronds rather shorter than stipe, deltoid-ovate, pinnate; lowest pinnae with the lowest inferior pinnules elongate and again pinnatifid, the 3 or 4 succeeding pairs lanceolate, pinnatifid into oblong segs, the uppermost pinnae like the segs of the lower; upper surface g; lower surface w'ish farinose; margin slightly revolute. Southwestern Tex. (Reverchon); NM (Wright). Synonyms: N. sulphurea J. Sm.—N. pulveracea Kunze.

**NOTHOLAENA CRETACEA** Liebm.

Rtstock short, oblique, scales rigid, lanceolate, with a narrow membranous margin; stipes 2-7' long, brownish, wiry, scaly when young; fronds 1-2' long, broadly deltoid-ovate to pentagonal, tri-quadrupinnatifid at base, gradually simpler above; ultimate segs oblong or triangular-oblong, num, crowded; upper surface more or less covered with decid glands; lower surface copiously farinose with y or w'ish powder except on the prominent dark brown rachises; margins more or less recurved, not covering the sporangia; spores globose, bk. SD Co! Baja! Ar (Parry, Lemmon). Synonyms: N. Californica D. C. Eaton.—N. candida of collectors.

**N: HOOKERI** D. C. Eaton.

Rtstock short, densely covered with rigid lanceolate dark-brown scales; stipes tufted, 4-8' long, r'ish-brown, wiry, shining; fronds 2-3' each way, nearly pentagonal, composed of 3 divisions; middle one slightly stalked, rhomboid-ovate, pinnatifid into a few toothed segs, the 2d pair larger than the 1st; the side divisions sessile, deltoid, pinnatifid on upper side as in middle division, but each bearing on the lower side a single large pinnatifid basal seg, and above it smaller segs like those of the upper side; lower surface covered with pale y powder. Tex; Ar. Synonyms: N. cretacea of check-lists, not of Liebm.—N. candida var. 5-fido-palmato Hooker.

II.—Fronds lanceolate or linear-oblong, bipinnate or tripinnatifid.

**N: GRAYI** Dav.

Stipes tufted, 1½-3½' long, terete, chestnut-brown, with nearly bk, rigid, linear-acuminate scales below, paler, decid scales above; fronds 2-4' long, ¼-1¼' broad, oblong-lanceolate, once or

twice pinnate, upper surface sparingly, under thickly covered with w powder; rachises brown like the stipes, coated with a granular substance extending down the stipes, and clothed with long, slender, entire or ciliate, pale or w'ish scales; pinnae short-stalked, oblique, unequally triangular-ovate, ovate-lanceolate, or lanceolate, deeply pinnatifid or pinnately divided into 1 or 2 pairs of short-stalked or sessile, oblong, pinnatifid obtuse pinnules, the remaining portion obliquely pinnatifid with alt, lobed or entire segs; margins unchanged, reflexed; sori brown in a continuous line at the ends of the free veins. southeastern Ar.

**N: LEMMONI** D. C. Eaton.

Rtstock short, scaly with narrow, pointed, rigid, dark-brown chaff; stalks dark r'ish-brown, wiry, 4-6' long, chaffy at base with scales a little wider and more scarious margined than those of rtstock, otherwise smooth; fronds 6-7' long, 1-1½' wide, linear-oblong, pinnate with num deltoid or ovate, 1 or 2 pinnatifid pinnae, lowest ones a little shorter than middle ones; upper surface herbaceous-g, smooth; lower surface covered with w or slightly y'ish ceraceous powder; sori forming a narrow sub-marginal line; margins of segs very slightly recurved. Ar.

III.—Fronds deltoid-ovate, tri-quadrupinnate at base.

**N: NIVEA** Desv.

Rtstock short, chaffy with narrow scales; stipes tufted, 4-6' long, wiry, bk, polished; fronds 3-6' long, 1½-2' broad, ovate, lanceolate, triangular-ovate or deltoid, tripinnate; primary pinnae mostly op, rachises nearly straight; pinnules long-stalked; segs roundish, nearly as broad as long, terminal ones larger, entire or 3-lobed; upper surfaces g, smooth, lower densely coated with pure w powder; sori brown, often descending the free veins half-way to midvein. Ar; NM.

**Variety DEALBATA** Dav.

Segs smaller, more num, longer than broad, terminal ones rarely lobed. Upper Missouri to NM; Ar. Synonyms: N. dealbata Kunze Cheilanthes dealbata Pursh.

**N: FENDLERI** Kunze.

Stipes densely tufted, dark-brown, 3-5' long; rachis and all its branches zigzag and flexuous; fronds broadly deltoid ovate, 3-5' each way, quadrupinnate below, gradually simpler above; pinnae alt; ultimate pinnules oval or elliptical, simple or 3-lobed. Colo; NM; Ar.

\*\*Fronds naked below.

**NOTHOLAENA TENERA** Gillies.

Stipes tufted, brownish, smooth and shining; fronds 3-4' long, ovate-pyramidal, bi-tripinnate; pinnae mostly opp, distant, lower ones somewhat triangular; ultimate pinnules ovate, often subcordate, obtuse, smooth and naked on both surfaces; considered as possibly only a form of N. nivica by Underwood. Southern California; Arizona; Utah.

**TAENTIS** Swz.

Sori linear, central or submarginal; veins reticulate. Five tropical species.

**T: LANCEOLATA R. Br.**

Rtstock creeping; stipes 1-2' long; fronds simple, 6-13" long,  $\frac{1}{2}$ - $\frac{3}{4}$ " broad, tapering both ways, edge entire or sometimes crisped, midrib prominent; veins immersed, exterior free and clubbed at apices; sori anti-marginal, in a continuous line near apex. Old Rhodes Key, Fla (Curtiss). Synonyms: *Lingua cervina* Plum.—*Pteris lanceolata* L.—*Pteropsis lanceolata* Desv.—*Neurodium lanceolata* Fee.

Tribe **VITTARIEAE**. Sporangia borne in a continuous marginal or intramarginal furrow.

**VITTARIA** J. E. Smith, Ac Roy Sci Turin mem 5:413 (1793).

Fronds simple, linear, grass-like. Grass-fern. Thirteen tropical sp.

**V: LINEATA** J. E. Smith, Ac Roy Sci Turin mem 5:413 (1793).

Fronds 6-18" long, 1-5" broad, narrowed gradually downward to a stout compressed st, edge often reflexed; sori in a broad intramarginal line in a slight furrow, edge of frond at first wrapped over it. Fla. Synonym: *V. angustifrons* Mchx.—*Pteris lineata* L. Sp Pl 1073 (1753).

Tribe **PTERIDEAE**. Sori marginal or intramarginal, provided with an indusium formed of the reflexed margin of frond, opening inwardly.

\*Sporangia borne on a reflexed portion of margin of frond. *Adiantum*.

\*\*Sporangia borne on a continuous veinlike receptacle which connects apices of veins. *Pteris*.

\*\*\*Sporangia at or near the ends of unconnected veins, borne on under surface of frond. *Cheilanthes*; *Cryptogramme*; *Pellaea*.

**Genus ADIANTUM Linnaeus.**

Sp Pl 1094 (1753).

Sori com num and distinct. Midrib of pinnules near lower margin or 0. Over 80 sp mostly tropical Am. Maidenhair. Section **EUADIANTUM**.

\*Fronds at least bipinnate, pinnules flabellate or cuneate.

I.—Fronds smooth.

**A. CAPILLUS-VENERIS** L, Sp Pl 1096. Da 20. B 2:342 d. Greene, Cal ac b 2:415, Cruz. P 1:208, Cedros.

Stipes nearly bk, polished, very slender; fronds ovate-lanceolate, delicate, bipinnate, upper half or third simply pinnate; pinnules and upper pinnae wedge-obovate or rhomboid, rather long-stalked, upper margin rounded and more or less incised, crenate, or acutely dentato- serrate, except where margin is recurved to form the lunulate separated indusia. Va; Ky; Fla; Ut; Baja! CD! SD Co!

Venus-hair or black maidenhair fern. United States. Mexico.

**A. TENERUM** Swz, Fl Ind Occ 3:1719 (1806).

Stipes 1" hi, erect, glossy; fronds 1-3" long, 9-18" broad, deltoid, tri-quadrifid; pinnules articulated to their petioles, falling off at maturity, cuneate, upper edge rounded or somewhat angular, broadly often rather deeply lobed; sori num, roundish, or transversely oblong. Fla.

**A. JORDANI** Muell, in bot zeit 22:25 t 1 f 1. B 2:485 as *A. emarginatum*.

Stipes rather stout, nearly bk, polished; fronds ovate or deltoid-pyramidal, bi-tripinnate; pinnules and upper pinnae ample, smooth or nearly so, rounded or even reniform, upper margin rounded, slightly incised; sori 2-5, transversely linear-oblong, subcontinuous. Cal; Ore; NM; Nev; SD! Baja! Synonyms: *A. emarginatum* Hooker.—*A. tenerum* Torrey.

California; Nevada; N. M.; Oregon.

II.—Fronds pilose, with w'ish hairs.

**A: TRICHOLEPIS** Fee. 8 me Mem Fam Fong 72 (1854-57).

Stipes smooth, polished, deep bk; fronds oval; pinnules roundish, moderately long-stalked; sori 3-7, of unequal size; indusia very velvety. West Tex; NM. Synonym: *A. dilatatum* Nuttall.

\*\*Fronds dichotomously forked, with num pinnae springing from upper side of the two branches.

**A. PEDATUM** L, Sp Pl 1095. B 2:342. Z 1:148; 2:131. Greene, Cal ac b 2:415, Cruz.

Stipes 9-15' long, dark chestnut-brown, globrous fronds nearly circular in outline; central pinnae 6-7' long, 1-2' broad; pinnules triangular-oblong, short-stalked sori roundish or transversely oblong. Maidenhair. Nova Scotia; BC; Alk; Ga; Miss; Ark; Kans; Ut; Cal.

Venus-hair fern; Black Maidenhair.

Variety **LANGIPERNUM** Burgess.

Pinnules longer-stalked and deeply cleft into narrow-toothed lobes on upper side. Mt. Findlayson BC.

**A. AETHIOPICUM**, Baker, Syn Fil 123. B 2:342, in part as *A. emarginatum*.

**A. AMERICANUM** Carnutus, Can Pl Hist 7 t 6. B 2:343 as *A. pedatum*.

**A. CHILENSE** Kaulfuss. Of American authors=*A. emarginatum* fide. B 2:342.

**A. CONCINNUM** Z 2:151.

**A. DILATATUM** Nutt, in Hook hb. B 2:342. Identity doubtful.

**A. EMARGINATUM** Hook, Sp Fil 2 t 75. Da 20. B 2:342, 485. Z 2:131, 382. Br 1:205. Cruz; 218 Rosa.

**PTERIS** L, Sp Pl 1073 (1753).

Sori continuous; indusium delicate, w'ish; midribs of pinnules central. A cosmopolitan genus of over 100 species (including *Pteridium*).

Section **EUPTERIS** Veins free stipes tufted, indusium single.

\*Lower pinnae linear, undivided.

**P: LONGIFOLIA** L, Sp Pl 1074 (1753).

Stipes 6-12' long, clothed more or less below with pale brown scales; fronds 1-2" long, 4-9" broad, oblong-lanceolate; pinnae sessile, 2-5" broad, linear, entire; veins close and fine, com once branched; indusium y'ish-brown. Fla.

\*\*Lower pinnae forked or slightly pinnate below.

**P: CRETICA** L, Mant 1:130 (1767).

Stipes 6-12' long, erect, stramineous or pale brown; fronds 6-12' long, 4-8" broad, lateral pinnae com in 2-6 opp sessile pairs, sterile ones considerably the



broadest and spinulose-serrate, lower pairs often cleft nearly to base, into 2 or 3 linear pinnules; veins fine, parallel, simple or once forked; indusium pale. Fla.

**P: SERULATA** L, f, Suppl Pl 445 (1781).

Ribbon-fern, spider-fern, saw-leaved bracken. Stipes 6-9' long, naked, pale or brownish; fronds 9-18' long, 6-9' broad, ovate, bipinnatifid, main rachis margined with a wing which is 1-2" broad at top and grows narrower downwards; pinnæ in 6 or more distinct opp pairs, upper ones simple, lower ones with several long linear pinnules on each side, edge of barren ones spinulose-serrate; veins simple or once forked. Ala (Mohr); Macon, Ga (Farnell); SC. Probably an escape from cult.

Section **PALISA** St. Hilaire. Veins free, rtstock creeping, stipes subdistant, indusium more or less double. See *Pteridium*.

**PTERIDIUM** Scop Fl Com ed 1, 169 (1760).

Section *Palsia* of *Pteris*.

**P: AQUILINUM** Kuhn in Deckins Reisen III, Bot Ost-Afrika 11 (1879).

Brake, Bracken, Eagle fern, Umbrella fern, Hog brake. Rtstock stout, wide-creeping, subterranean; stipes 1-2" hi, erect, stramineous or brownish; fronds 2-4' long, 1-3" wide, ternate, the 3 branches each bipinnate; upper pinnules undivided, lower more or less pinnatifid. Newfoundland; Quebec to Ala; Mo; Manitoba. Synonym: *Pteris aquilina* L. Sp Pl 1075 (1753).

Variety **PSEUDOCAUDATUM** Clute, Fern b 8:39 (1900), as syn.

Long Island, NY, to Fla, Ala and Tex, mainly near coast.

Variety **PUBESCENTS** Underwood, Our Native Ferns, ed 6, 91 (1900).

Fronds silky-pubescent or tomentose, especially on under surface; otherwise as type. Ar. Cal; Ut; BC. Synonym: *Pteris aquilina lanuginosa* Hooker, and American authors—not Bory, Willd, Sp Pl 5:403 (1810).

**P: CAUDATUM** Maxon, US Na MU pr 23:631 (1901).

Pinnules sometimes linear and entire, or with less crowded segs than *P. aquilina*; terminal lobe linear and entire. NJ; Fla; Tex. Synonyms: *Pteris caudata* L. Sp Pl 1075 (1753).—*Pteris aquilina caudata* Hook. Sp Fil 2:196 (1858).

**Genus CHEILANTHES** Swartz.

Syn Fil 126 (1806).

Sori minute, at ends of veins; indusium continuous or interrupted. Near 70 temperate and tropical sp.

Section **ADLANTOPSIS** Fee. Indusia distinct, roundish, confined to apex of a single veinlet.

**CHEILANTHES CALIFORNICA** Mett. cheil 44. B 2:336. Da 20. Z 1:147. 2:131. Greene, Cal ac b 2:415 Cruz.

Rtstock short, creeping chaffy; stipes densely tufted, dark brown, glossy, 4-8' long; fronds 4' or less each way, broadly deltoid-ovate, smooth on both surfaces, quadripinnatifid; lower pinnæ largest, triangular; upper ones gradually smaller and simpler; ultimate segs lan-

ceolate, acute, incised or serrate; indusia membranous. Cal; Baja; SD Col. Synonyms: *Aspidotis Californica* Nuttall, Hooker, Sp Fil 2:71 (1858) as syn.—*Hypolepis californica* Hook sp Fil 2:71 (1858).

Lace fern. Southern and Baja Cal.

**C: PRINGLEI** Davenport, Torr cl b 10:61 t 34 (1883). Z 2:150.

Rtstock slender, creeping, clothed with linear-lanceolate scales; stipes  $1\frac{1}{2}$ -4 $\frac{1}{2}$ ' long, rish or chestnut brown, scaly at base and sparingly above; fronds 1-2 $\frac{1}{2}$ ' long, nearly as broad, triangular or ovate-deltoid, 2-3-pinnately divided into 6-7 pairs of pinnæ, opp and spreading in the smaller sterile fronds, alt and erecto-patent in the larger fertile fronds, naked, dark-g; pinnæ 5-eighths to one and one-eighth inch long, lower unequally deltoid or ovate, bipinnate, uppermost oblong, pinnate or deeply pinnatifid; pinnules ovate or oblong, pinnately divided or cleft into oblique segs, which are again deeply cleft into cuneate strap-shaped divisions, those of largest segs again deeply cut into narrow, obtuse, cuneate lobes, recurved tips in fertile fronds forming distinct herbaceous inv with entire or crenulate margins; sori one to each ultimate lobe on apex of a free veinlet. Southeastern Ar (C. G. Pringle).

Section **EUCHEILANTHES**. Indusia more or less confluent, com extending over apices of several veinlets, but not continuous all round segs; segs mostly flat, not bead-like.

\*Segs of frond smooth.

I.—Pinnæ few, not more than 5-6 pairs.

**C: WRIGETHI** Hooker.

Stipes castaneous, slightly chaffy at base, 1-2' long; fronds 2-3' long, ovate-oblong, 3-pinnatifid, segs more or less incised; indusium subcontinuous or interrupted, similar to frond in texture. Tex; Ar.

II.—Pinnæ num.

**C: MICROXYLLA** Swz.

Rtstock short, creeping; stipes dark brown, glossy, rusty pubescent on upper side, 4-6' long; fronds 4-6' long, ovate-lanceolate, 2-3-pinnate; pinnæ lanceolate, lowest ones com largest and more deltoid; pinnules oblong or deltoid-ovate, deeply incised or pinnate; indusium similar in texture to frond, interrupted or subcontinuous. Fla; NM.

**C: ALABAMENSIS** Kunze.

Rtstock creeping, clothed with slender brown scales; stipes bk with scanty ferruginous wool; fronds 2-10' long, narrowly lanceolate, 2-pinnate; pinnæ close, ovate-lanceolate, lowest ones not enlarged, com smaller than those above; pinnules com acute, often auriculate on upper side at base; indusia pale, membranous, interrupted only by the incising of pinnules. Va; Ala; Tenn; Tex; Ar. Synonyms: *Pellaea Alabamensis* Baker.—*Pteris Alabamensis* Buckley, Am J sci 45:177 (1843).

\*\*Segs of frond glandular viscid.

**CHEILANTHES VISCIDA** Davenport.

Torr cl b 6:191. B 2:337.

Stipes 3-5' long, wiry, bk'ish, chaffy at

base with narrow ferruginous scales; fronds 3-5' long,  $\frac{3}{4}$ -1' broad, narrowly oblong, pinnate, with 4-6 distant pairs nearly sessile, deltoid, 2-pinnatifid pinnae; segs toothed, minutely glandular and everywhere viscid; teeth of seg recurved, forming indusia. Cal; CD!

Colorado Desert near Whitewater.  
\*\*\*Fronds somewhat hairy and glandular, not tomentose.

I.—Fronds deltoid-ovate; stipes stramineous.

**C. LEUCOPODA** Link.

Stipes 3-4' long, stout, chaffy at base; fronds 2-4' long, deltoid-ovate, 4-pinnate at base, gradually simpler above, everywhere glandular-puberulent; lowest pair of pinnae unequally deltoid-ovate, upper ones oblong; pinnules short-stalked; ultimate pinnules divided into minute rounded lobules, strongly revolute when fertile. Tex.

II.—Fronds ovate-lanceolate; stipes brownish.

**C. VESTITA** Swz, Syn Fil 128 (1806).

Stipes tufted, 2-4' long, wiry, chestnut brown; fronds 4-9' long, 1-2' broad, 3-pinnatifid; pinnae somewhat distant, lanceolate-deltoid; segs more or less thickly covered with acute hairs; sori copious; indusia formed of ends of roundish or oblong lobes. Conn; NY; Kans; Ga; Tex. Synonyms: *Nephrodium lanosum* Michx, Fl B or Am 2:270 (1803).—*Cheilanthes lanosa* Watt, J Bot Brit and Foreign 12: 48 (1874).

**CHEILANTHES COOPERAE** Eaton.

B 2:337. Da 20.

Stipes densely tufted, fragile, hairy with straightish nearly w articulated hairs which are com tipped with a glandular and viscid enlargement; fronds 3-8' long, 2-pinnate, pinnae rather distant, oblong-ovate; pinnules roundish-ovate, crenate and incised, ends of lobules forming herbaceous indusia.

Central and southern California.

Section **PHYSAPTERIS** Presl. Ultimate segs minute, bead-like, indusium com continuous all round the margin; fronds in one sp 2-4-pinnate, lower surface scaly or tomentose or both.

\*Fronds hairy or tomentose beneath, not scaly.

I.—Upper surface naked or nearly so.

**C. GRACILLIMA** Eaton. B 2:337. Z 2: 131.

Lace fern. Stipes densely tufted, 2-6' long, dark brown; fronds 1-4' long, narrowly ovate-lanceolate, bipinnate; pinnae num, crowded, pinnately divided into about 9 oblong-oval pinnules, at first slightly webby above, soon smooth, heavily covered beneath with pale ferruginous matted wool; indusia yish-brown, formed of the continuously curved margin. Cal; Ore; Idaho; BC. Synonym: *C. vestita* Brack, in Wilkes' US Expl Exp 16:71 (1854), not Swz.

**C. LENDIGERAE** Swz.

Rtstock cord-like, creeping, covered with narrow scales; stipes rather distant, 4-8' long, at first loosely tomentose at length nearly smooth; fronds 4-8' long, ovate-oblong, 3-4-pinnate; ultimate pinnules small, cuneate-obovate, pouch-like from the recurved margins, g above,

hairy below. Huachuca mts. Ar (Lemon).

II.—Upper surface decidedly pubescent

A.—Stipes tomentose or smooth.

**C. FEEI** Moore, Index Fil XXXVIII (1857).

Stipes densely tufted, slender, at first clothed with woolly hairs, at length nearly smooth fronds 2-4' long, ovate-lanceolate, 3-pinnate or 3-pinnatifid, rarely bipinnate; pinnae deltoid below, oblong-ovate above, lowest distant; ultimate pinnules minute, terminal one slightly largest, crowded; upper surface scantily tomentose, lower densely matted with wish-brown woolly hairs; indusia narrow, formed of the unchanged margin. Ill; Tex; Ar; Minn; BC. Synonyms: *C. lanosa* D. C. Eaton.—*C. vestita* Hooker in part.—*C. gracilis* Mett, Abh Senck Nat Gesell 3:80 (1859-61) not Kaulf.—*C. lanuginosa* Nuttall, Hooker, Sp Fil 2:99 (1858) as syn.—*Myriopteris gracilis* Fee, Gen Fil 150 (1850-2).

**C. TOMENTOSA** Link, Hort Berol 2:42 (1833).

Woolly lip-fern. Stipes tufted, 4-6' long, rather stout, covered with pale brown tomentum; fronds 8-15' long, oblong-lanceolate, everywhere but especially beneath tomentose with slender, brownish-w, obscurely articulated hairs, 3-pinnate; pinnae and pinnules ovate-oblong; ultimate pinnules  $\frac{1}{2}$ - $\frac{3}{4}$ ' long, terminal ones twice as large; indusium pale, membranous, continuous. Va; Mo; Ga; Tex; Ar. Synonym: *C. Bradburii* Hooker.

II.—AA.—Stipe and rachises covered with very narrow scales.

**C. EATONI** Baker, Hook & Baker, Syn. Fil ed 1, 140 (1868).

Differs from *C. tomentosa* chiefly in having scaly rachises, and reduced to a variety (Eatoni) by Davenport, Cat Day Hb suppl 49 (1883). Maxon restores it to specific rank. Ar.

**CHEILANTHES FIBRILLOSA** Davenport.

Plant 3-6' hl; rtstock forming dense, entangled clumps of short rhizomes, clothed with dark linear-lanceolate scales, passing gradually into lighter brown scales, mixed with coarse fibres and tomentum at base of stipes; stipes 2-3' long, chestnut brown, terete, at first tomentose with fibrous scales and wool, becoming smooth with age; fronds 2-3' long,  $\frac{3}{4}$ -1 $\frac{1}{2}$ ' wide, 3-pinnate, loosely covered with decid tomentum, that along the rachises beneath persistent, mixed with coarse fibres. Synonym: *C. lanuginosa fibrillosa* Dav.

San Jacinto mts, California (Parish).

**CHEILANTHES PARISHII** Davenport.

Rtstock creeping, short, clothed with deep brown linear-lanceolate scales, with darker nearly bk mid-nerves; stipes 2-3' long, approximate, light to lark brown, clothed at base with scales similar to those on rtstock, passing gradually into broader pale brown or nearly w nerveless scales, with more or less decid, slender, pale scales and chaff above; fronds 3-4' long, 1-1 $\frac{1}{4}$ ' broad, oblong-lanceolate, 3-4-pinnate, with both sur-



faces scantily clothed with a coarse tomentum; pinnæ alt, oblong-ovate, obtuse, lowermost somewhat distant; segs roundish, terminal ones largest, 3-lobed; indusia very narrow, only partially enclosing the sori. Type locality: Riverside (formerly part of SD) Co, Cal (Parish).

\*\*Fronds covered beneath with imbricated scales, not tomentose.

**C. FENDLERI** Hooker.

Stipes 2-5' long, chaffy with minute slender scales; fronds 3-4' long, ovate-lanceolate, 3-pinnate; scales of primary rachis like those of stipe, those of secondary and ultimate rachises larger, broadly-ovate, entire or nearly so, combed with w, imbricate and overlapping the (one-fourth to one-third line broad) subglobose ultimate segs: these are naked above, combed at center a broad scale; indusium formed of the much incurved margin. Text: Colo; Cal.

**CHEILANTHES CLEVELANDI** Eaton. B 2:338.

Stipes scattered, 2-6' long, dark brown, scaly when young, at length nearly smooth; fronds 4-6' long, ovate-lanceolate, 3-pinnate, smooth above, deep fulvous brown below from the dense covering of closely imbricate, ciliate scales growing on the ultimate segs as well as on the rachises; segs nearly round, 1-3d to ½' broad, terminal ones larger, margin narrowly incurved. Named in honor of Daniel Cleveland.

Southern and Baja California.

\*\*\*Under surface both tomentose and scaly.

**C. ELEGANS** Kuhn Beitr 8. B 2:338 as myriophylla.

**CHEILANTHES MYRIOPHYLLA** Desv. B 2:338. Z 2:131. Br 1:205 Cruz; 218 Rosa.

Rtstock very short, scaly; stipes tufted, 2-6' hl., castaneous, covered with pale brown scales and woolly hairs intermixed; fronds 3-8' long, oblong-lanceolate, 3-4-pinnatifid, smooth or pilose above, beneath matted-tomentose and densely clothed with pale brown, narrowly ovate-lanceolate, ciliate scales, those of ultimate segs with long, tortuous cilia; pinnæ deltoid-ovate, narrower upwards; ultimate segs minute, ¼" broad, crowded, innumerable, margin unchanged, much incurved; very variable. Synonyms: *C. elegans* Desv.—*C. villosa* Dav.

Texas; Arizona; southern and Baja Cal.

**C. LINDHEIMERI** Hooker.

Rtstock long, slender, chaffy, stipes scattered, 4-7' hl, bk'ish-brown, at first covered with scales and woolly hairs; fronds 3-5' long, ovate-lanceolate, 3-4-pinnate; ultimate segs ¼" long, crowded; upper surface w-tomentose, lower surface very chaffy, those of midrib ciliate at base, those of segs more and more ciliate, passing into entangled tomentum. Text: Ar.

Section **ALEUBITOPTERIS** Fee. Indusia more or less confluent; fronds farinose below.

**C. ARGENTEA** Kunze.

Stipes densely tufted, 3-6' long, castaneous; fronds 3-4' long, 2' broad, deltoid, 2-3-pinnatifid; lower pinnæ much

the largest, cut nearly to rachis; rachis polished like stipe; upper surface naked, lower thickly covered with w powder; sori num, very small. Alk. Synonym: *Pteris argentea* S. G. Gmel, Nov Comm Ac Sci Petrop 12:519 t 12 f 2 (1768).

**CRYPTOGRAMME** R. Br, App Frankl J 767 (1823).

Sporangia on back or near ends of veins forming oblong or roundish sori, which are at length confluent and cover back of pinnules; sterile and fertile fronds unlike, smooth. Two boreal species.

**C. ACROSTICHOIDES** R. Br, App Frankl J 767 (1823).

Parsley fern. Stipes densely tufted, stramineous; fronds dimorphous, sterile ones on shorter stalks, 3-4-pinnatifid, with toothed or incised segs; fertile ones long-stalked, less compound, with narrowly elliptical or oblong-linear pod-like segs. Alk, Mackenzie south to Cal; Colo; Lake Huron. Synonyms: *C. Crispa* forma americana Hook.—*Allosurus acrostichoides* Spreng.

**C. STELLERI** Prantl, Englers Bot Jahr 3:413 (1882).

Stipes scattered, slender, 2-3' long, stramineous or pale brown; fronds 2-4' long, 1-2' broad, ovate, 2-3-pinnatifid; pinnæ lanceolate-deltoid, cut to rachis into a few broad, blunt, slightly-lobed pinnules; texture thinly herbaceous flaccid; indusium broad, continuous membranous; veins of fertile fronds mostly only once-forked. Labrador; Alk; Mass; Ill; Ia; Pa; Colo.

Synonyms: *Pteris stelleri* S. G. Gamel Nov Comm Ac Sci Petrop 12:519 t 12 f 1 (1768).—*Pellaea stelleri* Watt, Can Fil No 2 (1869-70).—*Pteris gracilis* Michx, Fl Bor Am 2:262 (1803).—*Pellaea gracilis* Hooker, sp Fil 2:138 t 133 B (1858).—*Allosurus crispus stelleri* Milde.—*A. gracilis* Presl.

**GENUS PELLAEA** Link.

Link, Fil Sp Hort Berol 59 (1841).

Sori on the upper part of veins distinct, or mostly forming a marginal band of sporangia; sterile and fertile fronds com similar, smooth. Over 50 species.

Section **CHEILOPLECTON** Fee. Texture herbaceous or subcoriaceous, veins clearly visible, indusium broad, in most of the species rolled over the sori till maturity.

**P. BREWERI** D. C. Eaton.

Stipes densely tufted, covered with narrow, crisped, fulvous chaff; fronds 2-6' long, simply pinnate, pinnæ short-stalked, 6-8 pairs, membranous, mostly 2-parted, upper seg larger; segs obtuse, in fertile frond narrower; indusium continuous, pale; veins repeatedly forked. Colo; Cal.

Section **ALLOSOEUS** Baker. Texture coriaceous, veins not perceptible; indusium broad, conspicuous.

\*Pinnules or segs obtuse or barely acute.

I.—Fronds pinnate or bipinnate.

**P. ATROPURPUREA** Link.

Stipes tufted, 2-6' long, dark p; fronds 4-12' long, 2-6' broad, lanceolate or

ovate-l, simply pinnate or bipinnate below; pinnules and upper pinnae 1-2' long,  $\frac{1}{4}$ ' broad or less, nearly sessile, smooth; indusium formed of slightly altered incurved edge of pinnules. Vt; Tex; Ar. Synonyms: *Allosorus atropurpureus* Kunze.—*Pteris atropurpurea* L.—*Platyloma atropurpurea* J. Smith.

**F. ASPERA** Baker.

Stipes slender, 2-3' long, bk with scurfy pubescence; fronds 4-6' long, oblong-lanceolate, bipinnate; pinnae and pinnules deltoid-lanceolate or oblg, pinnules next to main rachis often lobed; all of them rough on both surfaces with short harsh hairs. Tex; NM. Synonym: *Cheilanthes aspera* Hooker.

II.—Fronds 2-4-pinnate, ultimate segs oval or cordate.

**PELLAEA ANDROMEDAEOFOLIA** Fee.

Stipes scattered, erect, pale brown, 2-12' long; fronds 6-12' long, 3-6' broad, ovate, 2-4-pinnate, 3-p; com pinnae rather distant, spreading; ultimate pinnules 2-5' long, oval slightly cordate coriaceous, margin of fertile ones sometimes revolute to midrib; veins num, parallel. Synonyms: *Allosorus andromedaefolius* Kaulf. —*Pteris andromedaefolia* Kaulf, Enum Fil 188 (1824).

Arizona; southern and Baja California. **P. PULCHELLA** Fee, Gen Fil 129 (1850-2).

Stipes densely tufted, 3-6' long, chaffy at base, nearly bk; fronds 3-9' long, 1-5' broad, triangular-ovate, 4-pinnate below, gradually simpler above; lower pinnae deltoid, narrowly triangular above; ultimate pinnules num, 1-3' long, oval or often cordate-ovate, stalked, coriaceous, smooth, edges often much reflexed. Tex; NM. Synonym: *Allosorus pulchellus* Mart & Gal, mem ac Brux, 15 (5):47 (1842).

III.—Fronds 3-4-pinnatifid; segs linear-oblg; secondary rachises margined.

**P. MARGINATA** Baker.

Stipes tufted, 3-9' long, castaneous, shining, slightly fibrillose at base; fronds 4-6' long, nearly as broad, deltoid; lower pinnae much the largest; indusium broad, continuous, margins slightly erose; texture chartaceous. Huachuca mts. Ar (Lemmon). Synonym: *Cheilanthes marginata* Hooker.

\*\*Pinnules mucronulate or decidedly acute.

I.—Fronds narrowly linear in outline, com bipinnate.

**P. TERNIFOLIA** Link.

Stipes tufted, nearly or quite bk, 2-6' long, fronds 4-10' long, narrowly linear; pinnae com 9-15 pairs, all but uppermost trifoliate; segs com linear, slightly mucronate, coriaceous, sessile or middle one indistinctly stalked, edges much inflexed in fertile fronds; indusium broad. Tex. Synonym: *Pteris ternifolia* Cav.

**F. BRACHYPTERA** Baker.

Stipes 2-8' long stout, p'ish-brown; fronds 3-8' long, narrow in outline from the ascending secondary rachises, bipinnate; pinnules crowded, 2-5" long, oblong-linear, simple or trifoliate, acute or mucronulate; margins inflexed to midrib in fertile fronds. Cal. Synonyms: *P. ornithopus brachyptera* D. C. Eaton.—

*Platyloma bellum* et *P. brachyptera* Moore.

II.—Fronds broader, lanceolate to ovate, 2-3-pinnate.

**PELLAEA ORNITHOPUS** Hook.

Stipes tufted, 3-8' long, rather stout, dark brown; fronds very rigid, 3-12' long, 2-3' broad, broadly deltoid-lanceolate, 2-3-pinnate; primary pinnae spreading or obliquely ascending, linear bearing 4-16 pairs of trifoliate (varying from simple to 5-7-foliate) mucronulate pinnules,  $1\frac{1}{2}$ -2" long; margins inflexed to midrib in fertile fronds. Synonym: *Allosorus mucronatus* D. C. Eaton.

California; Baja Cal. Tea or wire fern. **PELLAEA WRIGHTIANA** Hook.

Rtstock short, thick, densely chaffy; stipes crowded, p'ish-brown, 4-6' long; fronds 3-6' long, 1-3' broad, lanceolate to deltoid, trifoliate at apex, bipinnate below; pinnae short with 1-2 pairs of long, narrow pinnules besides the terminal one; mucro short, with broad cartilaginous margin; margin of fertile fronds inflexed to midrib. Extremely variable. Colo; Tex; Cal; Kans.

Variety **LONGIMUCRONATA** Davenport. Fronds decreasing to simply pinnate at apex, longer but less broadly winged mucro. Synonym: *P. longimucronata* Hooker.

Variety **COMPACTA** Davenport.

Pinnules densely crowded.

Section **PLATYLOMA** J. Smith. Texture coriaceous, veins com hidden, ultimate segs broad and flat, indusium so narrow as to be soon hidden by fr.

**P. BRIDGESII** Hooker.

Stipes 2-6' long, tufted, castaneous; fronds 4-6' lg, 1' or more broad, simply pinnate; pinnae 5-18 pairs, mainly opp, nearly sessile, glaucous g, coriaceous, rounded or corbate at base; indusium narrow, formed of w'ish margin of pinna, soon flattened out exposing broad sorus. Cal.

**P. FLEXUOSA** Link.

Rtstock creeping, rather slender; stipes r'ish, passing into a more or less flexuous or zigzag rachis; fronds 5-30' long, ovate-oblong, 2-3-pinnate; secondary and tertiary rachises com deflected and zigzag, rusty puberulent or nearly smooth; pinnae mostly alt; ultimate pinnules 5-10" long, roundish-ovate or subcordate, smooth, margins at first reflexed, soon flattened out. Tex; Cal. Synonym: *Allosorus flexuosus* Kaulf.

**P. INTERMEDIA** Mett.

Rtstock long, wide-creeping, slender, chaffy; stipes scattered, 4-6' long, pinkish-stramineous, smooth; fronds 5-10' long, 3-8' wide, ovate-bipinnate; pinnae nearly opp, remote; pinnules 2-6 pairs, petiolate, subcoriaceous, oval or cordate-ovate; veins obscure, rachises not pubescent. Huechuca mts, Ar (Lemmon).

Tribe **CERATOPTERIDAE**. Sorl on 2 or 3 longitudinal veins which are nearly parallel with edge of frond; aquatic **CERATOPTERIS** Brong, soc Philom h 1821:184.

Characters of the tribe.

**C. THALICTROIDES** Brong. Soc Philom b 1821:186 t 1.

Floating fern. Southern Fla, the only



sp. Synonym: *Acrostichum thallctroides* L, sp Pl 1070 (1753).

Tribe **BLECHNEAE**. Sori dorsal, linear or oblong, borne on transverse veins, parallel to midrib; indusium fixed at outer, opening at inner, margin.

\*Veins free. *Struthiopteris*; *Blechnum*.

\*Veins more or less reticulate. *Woodwardia*.

**STRUTHIOPTERIS** Scop, Fl Com ed 1, 168 (1760).

Sori in a continuous band next midrib; indusium elongate, formed of the recurved and altered margin of pinnae, or submarginal; fronds of 2 sorts, elongate, pinnate. Nearly 50 species, mainly of south temperate zone.

**S. SPICANT** Weiss, Pl Crypt 287 (1770).

Deer fern, Hard fern. Cal; Alk.

Synonyms: *Osmunda spicant* L sp Pl 1066 (1753).—*Lomaria spicant* Desv Mag Gesell Nat Fr Berlin 5:325 (1811).—

*Blechnum boreale* Swz. Schrad J bot 1800 (2): 75 (1801).—*Blechnum spicant* J. E. Smith, Ac roy sci Turin mem 5:411 (1793).

**BLECHNUM** L.

Sori linear, elongate, continuous near midrib; indusium continuous; fronds pinnate. Near 20 sp.

**B. SERRULATUM** Richard.

Stipes 6-12' long, stout, erect, nearly naked; fronds oblong-lanceolate, 1-1½' long, 3-6' broad, with 12-24 pairs of distinct linear-oblong pinnae, margins finely incised; texture coriaceous; veins very fine and close, fertile pinnae narrower. Fla. Synonym: *Blechnum angustifolium* Willd.

Genus **WOODWARDIA** Smith.

Sori linear or oblong, forming chain-like rows; indusia separate. Chain fern. Six sp. Named for Thomas J. Woodward, an English botanist.

Section **EUWOODWARDIA**. Fronds uniform, veins forming at least one series of areolae between sori and margins.

**W. CHAMISSOI** Brack, FUS Exp 138. B 2:344 as radicans.

**W. RADICANS** Am, mem ac Turin 5:412. B 2:344. Da 20. Baja! Greene, Cal ac b 2:415 Cruz.

**W. SPINULOSA** Mart & Gal, Mem Ac Brux 15 (5): 64 (1842).

Caudex stout, erect, rising a little above ground; stipes stout, 8-12' long; fronds 3-5' long, subcoriaceous, pinnate; pinnae 8-15' long, 2-4' broad, oblique to rachis, pinnatifid nearly to midrib; segs spinulose-serrate; veinlets forming a single row of oblong sorus-bearing areolae next midvein, besides a few oblique empty areolae outside the fringing ones, thence free to margin. Cal; Ar; Baja! Synonym: *W. chamissoi* Brock, in Wilkes' US Expl Exp 16:138 (1854).

*Woodwardia radicans americana* Hook, sp Fil 3:67 (1860).

Washington to Baja Cal; Arizona.

Section **ANCHISTEA** Fronds uniform, veins free between sori and margins.

**W. VIRGINICA** J. E. Smith.

Stipes stout, 12-18' long; fronds oblong-lanceolate, 12-18' long, 6-9' broad; pinnae linear-lanceolate, 4-6' long, ¾-1'

broad, cut nearly to rachis into linear-oblong lobes. Can; Fla; Mich; Ark. Synonyms: *W. Banisteriana* Michx.—*Blechnum Carolinianum* Walt.—*B. Virginicum* L.—*Doodia Virginica* Presl.

Section **LORINERIA** Presl. Fronds dimorphous, veins everywhere forming areolae.

**W. ANGUSTIFOLIA** J. E. Smith.

Sterile frond with slender stipes, 9-12' long, 6-8' broad, deltoid-ovate, with num oblong-lanceolate sinuate pinnae; rachis broadly winged; fertile frond with an elongate, castaneous st; pinnae 3-4' long, narrowly linear. Me; Fla; Mich; Ark. Synonyms: *W. onocleoides* Willd.—*W. areolata* Moore.—*Acrostichum areolatum* L.

Tribe **ASPLENIEAE**. Sori dorsal, linear or oblong, oblique to midrib, or rarely parallel with it; indusium fixed by one margin to veinlet, opening at the other, sometimes double.

\*Veins free. *Asplenium*; *Athyrium*; *Phyllitis*.

\*Veins reticulate. *Camptosorus*.

**ASPENIUM** L.

Sori on upper side of a fertile veinlet, rarely on both sides, oblong or linear, oblique, separate; indusium straight or rarely curved. Near 350 cosmopolitan sp.

Section **EUASPENIUM**. Veins free, simple or branched; indusium straight or slightly curved, attached to upper side of a vein.

\*Fronds simple.

**A. SERRATUM** L.

Fronds growing in a crown from a sh, stout, erect rtstock, 1½-2½' long, 2-4' broad, simple, spatulate or linear-oblong-lanceolate, margin crenulate or irregularly but finely serrate, subcoriaceous; midrib prominent, keeled and often bk-ish-p beneath; veins closely placed, 1-forked; sori elongate, following veins of upper ½ of frond from near midrib halfway to margin; indusia single, free edge entire. Fla.

\*\*Fronds pinnatifid or pinnate below, tapering to a point.

**A. PINNATIFIDUM** Nuttall.

Stipes tufted, 2-4' lg; fronds 3-6' lg, 1-2½' broad, lanceolate, pinnatifid, or pinnate below, tapering to a slender prolongation above; lobes roundish-ovate, or lowest pair acuminate; sori num. Pa; Ill; Ky; Ala.

**T. EBENOIDES** R. R. Scott.

Fronds 4-9' long, broadly lanceolate, pinnatifid, pinnate below; apex prolonged and slender; divisions lanceolate from a broad base, lower ones shorter; stipes bk and polished, as is lower part of midrib, especially beneath. Ct; NY; Ill; Ala.

\*\*\*Fronds once pinnate.

I.—Pinnae ¼-¾' long, mostly blunt. A.—Rachis chestnut brown or bk-ish.

**A. EBENEUM** Ait.

Stipes tufted, 3-6' long, chestnut brown, nearly naked; fronds 8-16' long, linear-lanceolate; pinnae 20-40, lanceolate, subfalcate, or lower oblong, ¼-1' long, dilated base auricled on upper or both sides; sori oft 10-12 on each side. Fla; Ky; Can. Synonym: *A. trichoman-*

oides Michx.

**A. PARVULUM** Mart & Gal.

Fronds tufted, erect, rigid, 4-10' long, narrowly linear-lanceolate; stipe and rachis bk and shining; pinnae num, oblong, obtuse, entire or crenulate, auricled on upper side, nearly sessile; middle pinnae longest, lower gradually shorter and deflexed; sori short, abundant. Va; SC; Fla; Ark; NM. Synonyms: *A. ebeneum* minus Hooker.—*A. resiliens* Kunze.

**A. TRICHOMANES** L.

Stipes densely tufted, p-brown, shining; fronds 3-8' long,  $\frac{1}{2}$ ' or more broad, linear; pinnae 15-30 pairs, nearly opp, roundish-oblong or oval, the 2 sides unequal, obliquely wedge-truncate at base, attached by a narrow point, edge slightly crenate, midvein forking and evanescent; sori 3-6 on each side of midrib. Eastern US to Pacific Coast. Synonym: *A. melanocaulon* Willd.

Variety **INCISUM** Moore. . . . .

Fronds larger, often  $\frac{3}{4}$ ' or more broad, pinnae more or less deeply incised. Vt.

**A. MONANTHEMUM** L.

Stipes densely tufted, 3-6' long, chestnut brown; fronds 6-12' long, narrow, with 20-40 pinnae on each side; pinnae crenate above, abruptly narrowed at base, oft auricled, lower much reduced; texture subcoriaceous; veins flabellate; sori 1-2, linear-oblong, parallel with lower edge of pinnae. Huachuca mts, Ar (Lemmon).

I.—AA.—Rachis g.

**A. VIBIDE** Huds.

Stipes densely tufted, 2-4' long, naked, lower part chestnut brown; fronds 2-6' long,  $\frac{1}{2}$ ' broad, with 12-20 pinnae on each side, which are ovate or rhomboidal in outline, upper edge narrowed suddenly at base, lower obliquely truncate, outer part deeply crenate; rachis naked; sori copious. Vt; Can; New Brunswick.

**A. DENTATUM** L.

Stipes tufted, 2-6' long, naked, ebeneous below; fertile fronds 2-3' long, 1' broad, with 6-8 pairs of stalked, oblong-rhomboidal pinnae, lower side truncate with a curve, outer edge irregularly crenate; sterile fronds smaller on shorter stipes; rachis naked; sori copious in parallel rows. Fla; SC.

II.—Pinnae only 2-5, linear-cuneate.

**A. SEPTENTRIONALE** Hoffm.

Stipes densely tufted, 3-6' long, slender, naked, ebeneous toward base; fronds irregularly forking, consisting of 2-5 narrowly linear rather rigid segs, which are entire or more frequently cleft at end into few long narrow teeth; sori elongate, near margin, com facing each other in pairs, com 2-3 to each seg. NM; Colo.

III.—Pinnae num, linear or linear-oblong acute or acuminate.

**A. ANGUSTIFOLIUM** Michx.

Stipes 1' or more long, brownish, slightly scaly below; fronds  $1\frac{1}{2}$ -2' long, 4-6' broad, lanceolate-oblong, falcid; pinnae 20-30 pairs, linear-lanceolate, acuminate, entire or crenulate, those of fertile fronds narrower; texture thinly herbaceous; sori linear, 20-40 each side of midvein. New England; Ky; Wis.

**A. FIRMUM** Kunze.

Stipes 4-8' long, erect, grayish, naked; fronds  $\frac{1}{2}$ -1' long, 3-4' broad; pinnae 12-20 pairs, oblong-lanceolate, point bluntish, margin inciso-crenate, upper one narrowed suddenly at base, lower one obliquely truncate; sori short, falling short of both midvein and margin. Fla; Ar.

\*\*\*\*Fronds 2-3-pinnatifid. A.—Texture somewhat coriaceous.

**A. RUTA-MURARIA** L.

Stipes tufted, 2-4' long, naked; fronds ovate-deltoid, 1-2' long, 2-3-pinnate below, simply pinnate above; divisions rhombic-wedge-shaped, toothed or incised at apex; veins flabellate; sori few, elongate, soon confluent. Vt; Mich; Ky.

**A. MONTANUM** Willd.

Stipes tufted, 2-3' long, naked; fronds 2-5' long, ovate-lanceolate, pinnate; pinnae 3-7-parted below, incised or toothed above; veins obscure; sori short, basal ones sometimes double. Ct; NY; Ga; Ky; Ark.

**A. GLENNIEI** Baker.

Caudex erect, with dark brown, linear-setaceous scales; stipes densely tufted,  $\frac{1}{2}$ -1' long, castaneous; fronds 3-4' long, oblanceolate, bipinnate; pinnae 20-25 pairs, lanceolate, lower gradually reduced, cupate-truncate; pinnules 5-6 pairs, oblong, toothed or externally subentire; sori 1 at base of each pinnule or 2 or more on lowest anterior. Huachuca mts. Ar (Lemmon).

\*\*\*\*AA.—Texture thinly herbaceous or membranous.

**A. BRADLEYI** D. C. Eaton.

Stipes tufted, 2-3' long, ebeneous, as also lower half of rachis; basal scales brown-bk, lanceolate-acuminate; fronds 3-7' long, oblong-lanceolate, bipinnatifid; pinnae 3-12 pairs, short-stalked or sessile, ovate-oblong, lowest not reduced, largest pinnatifid with oblong lobes toothed at tip; sori short, near midvein. NY; Tenn; Ky; Ark.

**A. MYRIOPHYLLUM** Presl, Rel Haenk 1:48 (1830).

Stipes tufted, 2-6' long; fronds 3-10' long, delicately membranous, lanceolate, narrowed below, 2-3-pinnate; ultimate segs obovate-oblong, entire or 2-3-lobed; veins single in each seg, bearing below middle a solitary oblong sorus. Fla. Synonyms: *A. rhizophyllum* myriophyllum Mett.—*Caenopteris* myriophyllum Swz Fl Ind Occ 3:1626 (1806).

**A. CICUTARIUM**, Swz, Prodr Veg Ind Acc 130 (1788).

Stipes tufted, 4-8' long, g'ish, naked; fronds 6-15' long, 4-6' broad, with 10-15 horizontal pinnae on each side, lower ones 2-3' long, 1' broad, cut down to rachis into linear or oblong segs, which are once or twice cleft at apex; rachis compressed, oft winged; sori principally in 2 rows. Fla.

Section **ATHYRIUM** Roth. See *Athyrium*.

**ATHYRIUM** Roth, Tent Fl Germ 3:58 (1800).

Veins free; sori more or less curved, sometimes horseshoe-shaped, oft crossing to outer or lower side of fr'ing vein-



let. Treated as a section of *Asplenium* by many of the older botanists.

**A. THELYPTEROIDES** Desv, Mem Soc Linn Paris 6:266 (1827).

Silvery spleenwort. Stipes long, erect, stramineous; fronds 1-2° long, 6-12° broad, bipinnatifid; pinnae linear-lanceolate; segs crowded, oblong, minutely toothed; sori 5-6 pairs to each seg, slightly curved lower ones often double. Can; Ga; Ala; Minn; Ill. Synonyms: *Asplenium thelypteroides* Michx, Fl Bor Am 2:265 (1803).—*Asplenium acrostichoides* Swz, Schrad J bot 1800 (2):54 (1801), not *Athyrium acrostichoides* Bory Merat, Fl Paris ed 4, 1:372 (1836). **A. FILIX-FOEMINA** Roth, Tent Fl Germ 3:65 (1800).

Lady fern: Female fern. Stipes tufted, 6-12° long, stramineous or brownish; fronds delicate, 1½°-3° long, broadly oblong-ovate, bipinnate; pinnae 4-8° long, lanceolate; pinnules oblong-lanceolate, pointed, more or less pinnately incised or serrate, distinct or confluent on secondary rachises by a very narrow inconspicuous margin; sori short; indusium straight or variously curved. Newfoundland to Fla; Bc; Cal; Ut; Nev; Ar; Ala. Synonyms: *Polypodium filix-foemina* L, sp Pl 1090 (1753).—*Asplenium filix-foemina* Bernh, Schrad Neuer J bot 1 (2):26 (1806).—*Aspidium filix-foemina* Swz.—*Nephrodium asplenoides* Michx.—and near 70 varieties which have been named and described.

**A. CYCLOSORUM** Rupr. Beitr Pflanzenk Russ Reich 3:41 (1845).

Alk to Cal; Nebr. Based on *Athyrium filix-foemina cyclosorum* Ledeb, Fl Ross 4:519 (1853).—*Asplenium filix-foemina cyclosorum* Rupr, D. C. Eaton in US Geol Surv W 100th Merid 6:331 (1879).

**PHYLITIS** Ludwig, Inst Hist Phys Reg Veg ed 2, 142 (1757).

Sori linear, confluent in pairs, which appear like a single sorus with the double indusium opening in middle.

**P. SCOLOPENDRIUM** Newm, Hist Brit Ferns ed 2, 10 (1844).

Hart's-tongue; Caterpillar fern; Hound's tongue fern. Stipes 2-6° long, fibrillose below; fronds oblong-lanceolate from an auricled heart-shaped base, entire or undulate, 7-18° long, 1-2° wide, bright g. Can; Vt; Tenn; Alk? Synonyms: *Asplenium scolopendrium* L, Sp Pl 1079 (1753).—*Scolopendrium vulgare* J. E. Smith, Mem ac Roy Sci Turin 5:421 (1793).—*S. scolopendrium* Karst, Deutsch Fl ed 1, 278 (1880-3).

**CAMPOTOSORUS** Link, Hort Berol 2:69 (1833).

Sori oblong or linear, borne partly on veins parallel to midrib, partly on veins oblique to midrib, 2 sp.

**C. RHIZOPHYLLUS** Link, Hort Berol 2:69 (1833).

Walking-leaf; walking fern; Wall link. Fronds evergreen, tufted, spreading or procumbent, 4-9° long, lanceolate from an auricled, heart-shaped or oft hastate base, tapering above into a slender prolongation which oft rts at apex. Can; Me; Minn; Kans; Ala; Ga. Synonyms: *Antigramma rhizophylla* J. E. Smith.—*Scolopendrium rhizophyllum* Hooker.—

*Asplenium rhizophyllum* L.

Variety **INTERMEDIUS** Arthur, bot gaz 8:200 t 3 (1883).

Base acute, without proper auricles, with a single fibro-vascular bundle in stipe. Ia.

Tribe **ASPIDIEAE**. Sori dorsal, round or roundish, on back or rarely on apex of a vein; indusium com membranous, rarely 0.

\*Without indusia. *Phegopteris*.

\*\*With indusia. A.—*Indusia superior*. *Aspidium*, *Nephrolepis*.

\*\*\*AA.—*Indusia* fixed by a broad base partly under sorus. *Cystopteris*.

\*\*\*\*AAA.—*Indusia* obscure; fertile frond much contracted, very unlike sterile *Onclea*.

\*\*\*\*\*AAAA.—*Indusia* inferior. *Woodsia*.

### Genus PHEGOPTERIS Fee.

Sori round, rather sm, borne on back of the free veins below apex; stipe continuous with rtstock. Beech-fern, about 100 sp.

Section **EUPHEGOPTERIS**. Veins free.

\*Fronds triangular, bipinnatifid; pinnae sessile, adnate to a winged rachis.

**P. POLYPODIODES** Fee, Gen Fil 243 (1850-22. B 2:345).

Stipes 6-9° long; fronds longer than broad, 4-9° long, 4-6° broad, hairy on veins especially beneath; pinnae linear-lanceolate, lowest pair deflexed and standing forward, segs oblong, obtuse, entire, basal ones decurrent and adnate to main rachis; sori near margin. Newfoundland; Alk; Va; Mich; Ia; Wash; Greenland. Synonyms: *P. vulgaris* Mett.—*Polypodium phegopteris* L, Sp Pl 1089 (1753).—*Phegopteris phegopteris* Undw, Small, Torr cl b 20:462 (1893).

**P. HEXAGONOPTERA** Fee.

Stipes 3-18° long, stramineous, naked; fronds as broad as long or nearly so, 7-12° long, slightly pubescent, oft finely glandular beneath; upper pinnae oblong, obtuse, toothed or entire, the very large lowest pinnae elongate and pinnately lobed; sori near margin or some between sinus and midrib. Can; Ill; Ky; Fla; La; Minn. Synonym: *Polypodium hexagonopterum* Michx, Fl Bor Am 2:271 (1803).

\*\*Fronds oblong lanceolate, 3-pinnatifid; rachis wingless.

**P. ALPESTRIS** Mettenius, Fil Hort Lips 83. B 2:345.

Rtstock short, thick, erect, or oblique; stipes 4-10° long, with a few brown, spreading scales near base; fronds 1-2° long; pinnae deltoid-lanceolate, lower one distant and decreasing moderately; pinnules oblong-lanceolate, incised and toothed; sori small, round, submarginal. Cal; Bc; Mont. Synonyms: *Polypodium alpestre* Hoppe, Taschenb 216 (1805).—*Aspidium alpestre* Swz.

\*\*\*Fronds ternate, the 3 divisions petiolate; rachis wingless.

**P. DEYOPTERIS** Fee. B 2:345.

Oak fern. Rtstock slender, creeping; fronds broadly triangular, 4-8° wide; the 3 primary divisions 1-2-pinnate; segs ob-

long, obtuse, entire or toothed; sori near margin. Newfoundland; Alk; Va; Colo; Ore; Greenland. Synonyms: *Polypodium dryopteris* L, sp Pl 1093 (1753).—*Nephrodium dryopteris* Michx.

**P. ROBERTIANA** Underwood. Our Native Ferns, ed 6, 109 (1900).

Stipes 6-10' long, stramineous when dry, glandular; fronds 6-8' long, 5-7' wide, deltoid-ovate in outline, bipinnate, lowest pair of pinnae far the largest, pinnatifid or again pinnate; upper pinnae smaller, pinnatifid; lobed, or entire; sori copious, forming submarginal rows around segs. Minn; Ia; Id; Labrador to Manitoba. Synonyms: *Polypodium robertianum* Hoffm, Deutsch Fl 2: add 4 (1795).—*Phegopteris dryopteris robertiana* Dav, Cat Dav Hb Suppl 47 (1883).—*P. calcareo* Fee, Gen Fil 243 (1850-2).

Section **GONIOPTERIS** Presl. Veins pinnate, lower veinlets of contiguous groups uniting.

**P. TETRAGONA** Fee.

Rtstock creeping; stipes erect, 6-18' long, naked or slightly villose; fronds 1-2' long, 6-12' broad; pinnae num, spreading, 3-6' long, lowest narrowed at base and sometimes stalked, deeply pinnatifid; texture thinly herbaceous; rachis and under surface finely pubescent; sori in rows near midrib. Marion Co, Fla (Reynolds).

**P. REPTANS** D. C. Eaton, Torr cl b 10; 101 (1883).

Rtstock short, creeping; stipes 3-10' long, clustered, gray-stramineous, slender, naked; fronds 4-12' long, membranous, softly hairy with branched or stellate hairs, oblong-lanceolate, pinnate with nearly or quite sessile, oblong, crenately pinnatifid pinnae, apex pinnatifid, oft elongate and rt-ing; veins pinnate, simple, basal veinlets oft anastomosing; sori on middle of veinlets, rather small, sometimes with a minute rudimentary indusium. Fla. Synonyms: *Polypodium reptans* Swz, Fl Ind Occ 3: 1656 (1806).—*Aspidium reptans* Mett.

#### Genus **ASPIDIUM** Swartz.

Indusium orbicular and fixed by the center, or reniform and fixed by sinus, opening all round margin; sori mostly on back of veins. The sections of this genus, as formerly understood, now constitute the genera *Dryopteris*, *Polystichum*, *Phanerophlebia* and *Tectaria*, which see.

**TECTARIA** Cav.

Veins anastomosing copiously.

**T. TRIFOLIATA** Cav.

Stipes tufted, 1' or more long, brownish, scaly at base; fronds 1-1½' long, ½-1' broad, with a large ovate-acuminate terminal pinna narrowed or forked at base, and 1 or 2 lateral ones on each side, the lowest mostly forked; primary veins distinct to margin; areolae fine, copious, with free included veinlets; sori in rows near main veins; indusium orbicular, peltate. Fla; Tex. Synonyms: *Polypodium trifoliatum* L, sp Pl 1087 (1753).—*Aspidium trifoliatum* Swz, Schrad J bot 1800 (2):30 (1801).—*Dryopteris trifoliata* Kuntze, Rev Gen Pl 2:814 (1891).

**PHANEROPHLEBIA** Presl, Tent Pterid 84 (1836).

Indusium peltate; fronds simply pinnate with broad pinnae; veinlets com uniting slightly near margin.

**P. AURICULATA** Underwood, Torr cl b 26:212 t 359 f 3-4, t 36 f 2 (1899).

Stipes tufted, clothed below with large scales; fronds ½-2' long, coriaceous; pinnae 2-12 pairs, short-stalked, ovate-oblong or broadly lanceolate, terminal one distinct, and in small fronds the largest, appressed-serulate, smooth on both surfaces; veins pinnate, veinlets few, free or uniting near margin; sori scattered in several irregular rows. Tex; Ar. Synonym: *Aspidium juglandifolium* in part of recent authors, not Kunze, Klotzsch, Linnaea 20:363 (1847).

**POLYSTICHUM** Roth, Tent Fl Germ 3: 69 (1800).

Indusium orbicular and entire, peltate, fixed by depressed center; pinnae and pinnules com auricled on upper side at base, mucronately serrate; veins free. \*Fronds simply pinnate, long-stalked, lanceolate.

**P. ACROSTICHOIDES** Schott, Gen Fil 1834.

Christmas fern; evergreen wood-fern; Shield fern. Stipes 6-8' long, densely clothed below with pale brown lanceolate scales; fronds ½-2' hl, 3-5' broad; pinnae linear-lanceolate, somewhat falcate, half-halberd-shaped at base, serrulate with appressed bristly teeth; fertile ones contracted and smaller, bearing contiguous sori near middle, soon covering entire surface. Nova Scotia; Wis; Ia; Miss; Fla. Synonyms: *Nephrodium acrostichoides* Michx, Fl Bor Am 8:267 (1803).—*Aspidium acrostichoides* Swz, Syn Fil 44 (1806).—*Dryopteris acrostichoides* Kuntze, Rev. Gen Pl 2: 812 (1891).

**P. MUNITUM** Presl, Tent Pterid 83 (1836).

Stipes 4-12' long, chaffy like rachis with brown scales; fronds growing in a crown 1-4' long, tapering slightly toward base; pinnae num, linear-acuminate, 3-4' long, very sharply and oft doubly serrate, with appressed needle-like points; sori num, forming 1 row each side of midrib half-way to margin. Cal; Ore; Id; Alk. Synonyms: *Aspidium munitum* Kaulf, Enum Fil 236 (1824).—*Dryopteris munita* Kuntze, Rev Gen Pl 2:813 (1891).

\*Fronds simply pinnate, scarcely stalked, linear-lanceolate.

**P. LONCHITIS** Roth, Tent Fl Germ 3: 71 (1800).

Holly fern. Fronds 9-20' long rigid; pinnae 1' or more long, broadly lanceolate-falcate, or lowest triangular, strongly auricled on upper side, lower obliquely truncate, deeply spinulose-toothed; sori contiguous and near margin. Can; Wis; Ut; Cal; Wash; Mont; Colo; Artic Am. Synonyms: *Polypodium lonchitis* L, sp Pl 1088 (1753).—*Aspidium lonchitis* Swz, Schrad J bot 1800 (2):30 (1801).—*Dryopteris lonchitis* Kuntze, Rev Gen Pl 2:813 (1891).

\*\*\*Fronds bipinnate or nearly so.

**P. SCOPULINUM** Maxon, Fern b 8:29 (1900).

\*Stalk very short; frond narrowly lan-



ceolate, less than 1" lg, scarcely  $1\frac{1}{2}$ ' wide, sub-coriaceous, chaff mostly decid, pinnate; pinnae num, 7-9" long, 4-6" wide at base, ovate, rather obtuse, lower part pinnately lobed, upper half serrate with pointed and barely aculeate teeth, sori remote from margins."—D. C. Eaton, Ferns NA 2:125 t 62 f 8 (1880), as *Aspidium aculeatum scopulinum*, citing *Aspidium Lonchitis* Eaton, in Coulter's report in Hayden's 6th ann r of Geol Surv Terr 1872:788, as synonym. Wash; Id; Ut; Southern Cal; Quebec.

**P. LEMMONI** Underwood, Our Native Ferns, ed 6, 116 (1900).

Stipes tufted, 2-6' long, more or less densely clothed with lanceolate dark brown scales; fronds  $\frac{1}{2}$ -1" long, 2-3' broad, with num dense oft imbricated, lanceolate pinnae, which are cut below into slightly toothed oblong rhomboidal pinnules; teeth blunt or mucronate; texture coriaceous; both surfaces naked; rachis stout, compressed, scaly; veins close, immersed; sori copious. Cal; Alk. Synonym: *Aspidium Mohriodes* of Am authors, not Bory, Crypt Voy Duperr 267 (1828).

**P. CALIFORNICUM** Underwood, Our Native Ferns, ed 6, 116 (1900).

"Stalks rather long; frond much elongated, scarcely narrowed at base, thinly subcoriaceous, pinnae very num, lance-linear, but slightly incised above middle, more and more deeply cut towards rachis, segs rhomboid-ovate, acute, serrate with incurved aculeate teeth, the lowest superior one the largest, but scarcely distinct as a pinnule, and not at all auricled."—D. C. Eaton, Ferns NA 2:124, as *Aspidium aculeatum californicum*, citing Ferns of the southwest 336, and *Aspidium californicum* Eaton, in Am ac pr 6:555 (1865). and Baker, Syn Fil 253, as synonym. Cal; Wash. Synonym: *Dryopteris aculeata californica* Underwood, Our Native Ferns ed 4, 112 (1893).

**P. BRAUNII** Lawson, Fern Fl Can [19] (1889).

"Stalk very short; frond elliptical-lanceolate, tapering from the middle to both base and apex, bipinnate; pinnules mostly distinct and very short-stalked, ovate or trapezoid-oblong, obtuse, truncate and almost rectangular at base, slightly auricled, sharply serrate with incurved teeth, chaffy and fibrillose beneath."—D. C. Eaton, Ferns NA 2:124, as *Aspidium aculeatum braunii*, and cites Doell, Rheinische Flora 27.—Gray, Man ed 2:599.—Milde, Fil Eur et Atlant 108.—*Aspidium Braunii* Spenner, Fl Frib 1:9 t 2; Mettenius, Fil Hort Lips 88.—*Aspidium aculeatum* Pursh, Fl Am Sept 2:662, and Am authors generally.

Nova Scotia; Alk; BC; Mich; Pa; Vt; NH; Me. Synonyms: *Dryopteris aculeata braunii* Koch, Underwood, Our Native Ferns ed 4, 112 (1893).—D. braunii Underwood in Brit & Brown III Fl 1:15 (1896).

**P. ACULEATUM** Roth, Tent Fl Germ 3: 79 (1800).

Rtstock stout, erect; stipes variable in length, very chaffy with large and

small scales intermixed as in rachis; fronds 1-2" long, growing in a crown, oblong-lanceolate, pinnate; pinnae closely placed, lanceolate from a broad base, mostly curved upwards, incisely pinnatifid or again pinnate; segs or pinnules of variable shape, oval-rhomboidal, or unequally triangular-ovate and auriculate on upper side of slightly stalked base, teeth aculeate in various degrees; under surface more or less chaffy-fibrillose; sori in 2 rows, on segs nearer midvein than edge. Cal; Mt Peddo, Wash (Suksdorf). Synonyms: *Polypodium aculeatum* L, Sp Pl 1090 (1753).—*Aspidium aculeatum* Swz, Schrad J bot 1800 (2): 37 (1801).—*Dryopteris aculeata* Kuntze, Rev Gen Pl 2: 812 (1891).

**DEYOPTERIS** Adans, Fam Pl 2:20 (1763).

Indusium cordato-reniform or orbicular with a narrow sinus; veins free.

\*Texture thin—membranous, veins simple or 1-forked, fronds 2-pinnatifid.

1.—Lowest pinnae gradually reduced to mere lobes.

**D. OBOEPTERIS** Maxon, US Na Mu pr 23:638 (1901).

Heath fern. Rtstock short, erect or decumbent, scaly; stipes short, tufted, scaly below; fronds  $1\frac{1}{2}$ -2" long firm, membranous, broadly lanceolate, gradually tapering and attenuated below, glandular; pinnae 2-3' long, sessile from a broad base, lanceolate-acuminate, deeply pinnatifid, gradually shorter to the lowest, which are more distant, deltoid, and less than 1' long; segs flat, nearly entire, oblong; sori quite marginal; indusia delicate, membranous, more or less toothed at margin, BC; Alk; Wash. Synonyms: *Aspidium oreopsis* Swz, Schrad J bot 1800 (2): 35 (1801).—*Polypodium montanum* J. A. Volger, Desert Polyp Mont 1781, not Lam, 1778.—*Dryopteris montana* Kuntze, Rev. Gen Pl 2:813 (1891).

**D. NEVADENSE** Underwood, Our Native Ferns, ed 4, 113 (1893).

Rtstock creeping, densely covered with persistent bases of former stalks; fronds in a crown,  $1\frac{1}{2}$ -3" long, lanceolate; pinnae linear-lanceolate from a broad base, deeply pinnatifid, lower pairs distant and gradually reduced to mere auricles; segs crowded, oblong, slightly hairy on veins beneath, and sprinkled with minute resinous particles; veins about 7 pairs to a lobe; sori close to margin; indusium minute, furnished with a few dark-colored marginal glands, and bearing several straight jointed hairs on upper surface. Cal; Ore. Synonym: *Aspidium Nevadaense* D. C. Eaton, Ferns NA 1:73 t 10 (1878).

**D. CONTERMINA** (*Nephrodium conterminum* Desv).

Variety **STEGOSA** Underwood, Our Native Ferns, ed 4, 113 (1893).

Rtstock stout, erect, oft extending 1" above ground, bearing a crown of fronds; stipes very stout, narrowly wing-margined at base; fronds 1-4" long, lanceolate in outline, caudate-acuminate, much narrowed at base, somewhat rigid, pinnate; pinnae sessile, nar-

rowly lanceolate from a broader base, acuminate, deeply pinnatifid into oblong, obliquely subfalcate, obtuse segs; under surface copiously dotted with resinous globules; veins free, simple; sori near margin; indusium reniform, minute, glandular, somewhat pilose, evanescent. Fla. Synonyms: *Aspidium strigosum* Fee, Hist Fouget Lycop Antille 78 t 22 f 2 (1866).—*Aspidium conterminum* Strigosum D. C. Eaton, Torr cl b 7:62 (1880).—*Nephrodium conterminum* Desv. in part.

**D. NOVEBORACENSIS** A. Gray, Man ed 1, 630 (1848).

New York fern. Rtstock slender, creeping; fronds 1-2' long, 4-6' broad, lanceolate, tapering both ways from middle; pinnae lanceolate, 2 or more lowest pairs gradually shorter and deflexed, those of barren frond broader; segs flat, oblong, basal ones oft enlarged; veins simple or forked in basal lobes; sori distinct, near margin; indusium minute, margin glanduliferous. Newfoundland; Minn; Ga; Ala; Ark. Synonyms: *Polypodium noveboracense* L, Sp Pl 1091 (1753).—*Aspidium noveboracense* Swz, Schrad J bot 1800 (2): 38 (1801).—*A. thelypteroides* Ewz.—*Nephrodium noveboracense* Desv.—*Lastrea noveboracensis* J. E. Smith.

II.—Lower pinnae little smaller than those above.

**D. TELYPTERIS** A. Gray, Man ed 1, 630 (1848).

Marsh fern; Snuff-box fern: Rtstock slender; fronds 1-2' long, 4-6' broad, lanceolate, pinnae mostly horizontal, linear-lanceolate; segs oblong, entire, obtuse or appearing acute in fr from the strongly revolute margins; veins mostly forked, bearing sori near their middle; indusia minute, smooth, naked. New Brunswick; Manitoba; Kans; Tex; Fla. Synonyms: *Acrostichum thelypteris* L, sp Pl 1071 (1853).—*Aspidium thelypteris* Swz, Schrad J bot 1800 (2): 40 (1801).—*Polypodium thelypteris* L.—*Nephrodium thelypteris* Desv.—*Lastrea thelypteris* J. E. Smith.

**D. PATENS** Kuntze, Rev. Gen Pl 2:813 (1891).

Sweet fern. Rtstock rather stout, bearing several fronds at growing end; fronds 2-3' long, 4-10' broad, ovate-oblong, softly pubescent beneath; pinnae closely placed, linear-acuminate, lowest pair somewhat deflexed, all cut  $\frac{3}{4}$  of way to midrib; segs num, acutish, basal ones longest; veinlets evident, lowest ones of adjoining segs oft uniting; sori near margin; indusia very pubescent. Fla; Ala; Cal. Synonyms: *Polypodium patens* Swz, Prodr Veg Ind Occ 133 (1788).—*Aspidium patens* Swz, Syn Fil 49 (1806).—*A. molle* Swz, Schrad J bot 1800 (2): 34 (1801).

**D. SIMULATA** Davenport, bot gaz 19: 497 (1894), as syn.

Me to Md; Mo. Synonym: *Aspidium simulatum* Davenport, bot gaz 19:497 (1894).

\*\*Texture firmer or subcoriaceous, veins forking freely.

I.—Fronds pinnate; pinnae cut into

spreading triangular lobes; sori confluent.

**D. UNITA** Kuntze, Rev Gen Pl 2:811 (1891).

Stipes 1-1½' long, brownish, naked; fronds 1½' or more long, 5-8' broad; pinnae narrow, cut from 1-3d to halfway down into sharp, pointed lobes; lower pinnae not reduced; veins pinnate in the broad lobes with 6-8 veinlets on each side, lower ones of contiguous groups united; sori near ends of veins principally in lobes. Fla. Synonyms: *Polypodium unitum* L, Sp Pl ed 2, 1546 (1764).—*Aspidium unitum glabra* Mett, Ann Mus bot Ludg Bat 1:230 (1863-4), not *A. glabrum* Mett (1856-8).

II.—Fronds bipinnatifid or bipinnate; indusia rather large; segs not spinulose. A.—Fronds small, narrowly lanceolate.

**D. FRAGRANS** Schott, Gen Fil 1834

Fragrant fern. Fronds 4-12' hl, glandular and aromatic; pinnae linear-oblong, pinnately parted; segs toothed or nearly entire, nearly covered beneath with very large thin imbricate indusia, which are orbicular with a narrow sinus, margin ragged and sparingly glanduliferous. Labrador; Alk; NY; Wis; Minn; Vt; NH; Me; Greenland. Synonyms: *Polypodium fragrans* L, sp Pl 1089 (1753).—*Aspidium fragrans* Swz, Schrad J bot 1800 (2):35 (1801).

II.—AA.—Fronds larger, mostly 2-4' hl.

(1). Fronds bipinnatifid or nearly twice pinnate; indusia large, thinnish and flat.

**D. FLORIDANA** Kuntze, Rev Gen Pl 2: 812 (1891).

Stipes 6-10' long, sparingly clothed with ovate scales; fronds lanceolate, 18-20' long, 5-8' broad; fertile pinnae confined to upper half of frond, narrowly lanceolate, cut down to narrowly winged secondary rachises into oblong, distinct pinnules; sterile pinnae broader, shorter, and sub-deltoid below, less deeply cut. Fla; Ala. Synonyms: *Nephrodium floridanum*. Hooker, Fil Exot t 99 (1859).—*Aspidium floridanum* D. C. Eaton, in Chapman's Fl So US ed 1,595 (1860).—*A. cristatum floridanum* Hooker.

**D. CRISTATA** A. Gray, Man ed 1, 631 (1848).

Crest fern; Crested shield fern. Fronds linear-oblong or lanceolate in outline, 1-2' long; pinnae short, 2-3' long, triangular-oblong or lowest nearly triangular, deeply pinnatifid; segs 6-7 pairs, finely serrate or cut-toothed; sori as near midvein as margin; indusia smooth, naked. Can; Ark; Id; Nebr; Va. Synonyms: *Polypodium cristatum* L, sp Pl 1090 (1753).—*Aspidium cristatum* Swz, Schrad J bot 1800 (2): 37 (1801).—*A. lancastriense* Spreng.—*Nephrodium cristatum* Michx.—*Lastrea cristata* Presl.

Variety **CLINTONIANA** Underwood, Our Native Ferns, ed 4, 115 (1893).

Fronds much larger, 2½-4' long; pinnae oblong-lanceolate, broadest at base, 4-6' long, 1-2' broad, deeply pinnatifid; segs 8-16 pairs, crowded or distant, linear-oblong, obscurely serrate; veins pinnately forking, bearing sori near mid-



vein. Me; Wis; Va. Synonym: *Aspidium cristatum clintonianum* D. C. Eaton, in Gray Man, ed 5, 665 (1867).

**D. GOLDIANA** A. Gray, Man ed 1, 631 (1848).

Goldie's fern. Fronds broadly ovate, 2-4' long; pinnae 6-9' long, broadest in middle, pinnately parted; segs about 20 pairs, oblong-linear, subfalcate, serrate with appressed teeth; veins bearing sori very near midvein; indusia very large, orbicular with a narrow sinus. New Brunswick; Minn; NC; Tenn; Ia; Ky. Synonyms: *Aspidium goldianum* Hooker, Edinb Phil J 6:333 (1822).—*Nephrodium goldieanum* Hooker.—*Lastrea Goldieana* J. E. Smith.

Variety **CELSA** Palmer, Biol soc Wash pr 13:65 t 1 f 1-6, 8-12 (1899).

Log fern. Dismal swamp, Va (Wm. Palmer; Bartsch).

(2) Fronds mostly bipinnate; indusia convex, marginal glands 0.

**D. FILIX-MAS** Schott, Gen Fil 1834.

Male fern; Sweet fern. Rtstock short, stout; fronds in a crown, 1-3' hi, broadly oblong-lanceolate, slightly narrowed toward base, bipinnatifid or bipinnate; pinnules oblong, smooth, polished beneath, larger ones pinnately incised; sori large, near midvein, com on lower half or 2-3 ds of seg; indusia firm, smooth; rachis more or less chaffy. Can; Colo; Ar; Cal; Ore; Alk; Mich; SDak. Synonyms: *Polypodium filix-mas* L sp Pl 1090 (1753).—*Aspidium filix-mas* Swz, Schrad J bot 1800 (2): 38 (1801).—*Nephrodium filix-mas* Rich.—*Lastrea filix-mas* Presl.

**D. MARGINALIS** A. Gray, Man ed 1, 632 (1848).

Marginal shield fern; Rock fern; Wood fern. Fronds smooth, nearly coriaceous in texture, 6'-2' long, ovate-oblong; pinnae lanceolate, broadest just above base; pinnules oblong or oblong-falcate, entire or crenately toothed; sori near margin. Nova Scotia; BC; Ark; Ala; Ga. Synonyms: *Polypodium marginale* L, Sp Pl 1091 (1753).—*Aspidium marginale* Swz, Syn Fil 50 (1806).—*Nephrodium marginale* Michx.—*Lastrea marginalis* J. E. Smith.

III.—Fronds bipinnate or 3-pinnatifid; segs spinulose-toothed.

**D. RIGIDA** (*Aspidium rigidum* Swz.).

Variety **ARGUTA** Underwood, Our Native Ferns, ed 4, 116 (1893).

Rtstock short, stout; fronds in a crown on chaffy stalks, half-evergreen, smooth above, paler and more or less glandular beneath, 1-3' hi, ovate-lanceolate or triangular-l, bipinnate; pinnae broadly oblong-lanceolate, lowest ones broadest, scarcely shorter than middle ones; pinnules oblong, incised or doubly serrate with spinulose teeth; indusia firm, convex, edge bearing short-stalked glands. Cal; Ore; Alk; chiefly near coast. Synonyms: *Aspidium argutum* Kaulf, Enum Fil 242 (1824).—*A. rigidum argutum* D. C. Eaton, in US Geol Surv W 100th Merid 6:333 (1879).

**D. SPINULOSA** Kuntze, Rev. Gen Pl 2: 813 (1891).

Spiny shield fern. Stipes with a few, pale brown, decid scales; fronds ovate-

lanceolate, bipinnate, pinnae oblique to rachis, elongate-triangular, lower pairs broadly triangular; pinnules oblique to midrib, connected by a very narrow wing, oblong, incised or pinnatifid with lobes spinulose-toothed; indusia smooth, marginal glands 0. Newfoundland; Alk; Va; Ky; Nebr; Wash. Synonyms: *Polypodium spinulosum* Retz, Fl Sand ed 2, 250 (1795).—*Aspidium spinulosum* Swz, Schrad J Bot 1800 (2):38 (1801).—*Nephrodium* s Desv.—*Lastrea spinulosea* Presl.

Variety **INTERMEDIA** Underwood, Our Native Ferns, ed 4, 116 (1893).

Scales of stipes few, brown with a darker center; fronds oblong-ovate, 2-3-pinnate; pinnae spreading, oblong-lanceolate, lowest unequally triangular-ovate; pinnules crowded, pinnately divided; margin of indusium denticulate and beset with stalked glands. Can; Tenn; NC; Alk; Labrador. Synonyms: *Aspidium intermedium* Muhl, Willd sp Pl 5:202 (1810).—*A. americanum* Dav.—*A. spinulosum intermedium* D. C. Eaton in A. Gray, Man ed 5, 665 (1867).—*Dryopteris intermedia* A. Gray, Man ed 1, 630 (1848).

Variety **DILATATA** Underwood, Our Native Ferns, ed 4, 116 (1893).

Spreading wood fern. Scales of stipes large, brown with a darker center; fronds broadly ovate or triangular-ovate, com 3-pinnate; pinnules lance-oblong, lowest oft much elongated; indusia smooth and naked. Newfoundland; Alk; Cal; Ore; Mont; Va. Synonyms: *Polypodium dilatatum* Hoffm. Deutsch Fl 2: 7 (1795).—*Aspidium spinulosum dilatatum* Hooker, Brit Fl 444 (1830).—*Dryopteris dilatata* A. Gray Man ed 1, 631 (1848).—*Aspidium dilatatum* Swz.—*A. campylopterum* Kunz.—*Nephrodium dilatatum* Desv.—*Lastrea dilatata* J. E. Smith.

**D. BOOTTII** Underwood. Our Native Ferns, ed 4, 117 (1893).

Boott's wood fern. Scales of stipes pale brown; fronds elongate-oblong or elongate-lanceolate in outline; pinnules broadly oblong, very obtuse, lower pinnatifid, upper and smaller merely serrate; indusia minutely glandular. Can; Alk; Minn; Va. Synonyms: *Aspidium boottii* Tuckerman, Hovey's Mag hort 9:145 (1843).—*A. spinulosum boottii* D. C. Eaton, in Gray Man, ed 5, 665 (1867).

**D. PATULA** Underwood, Our Native Ferns ed 4, 117 (1893.)

Stipes tufted, 8-12' long stramineous, scaly at base; fronds pale g, 1-2' long, ½-1' broad, ovate-lanceolate; pinnae lanceolate or lower subdeltoid; rachis and both surfaces naked; sori in rows midway between edge and midrib; indusium conspicuous, naked, Huachuca mts, Ar (Lemmon). Synonyms: *Aspidium patulum* Swz, Konigl Vetensk Ak ad Handl 1817:74.—*A. karwinskyanum* of Lemmon's distribution.—*Nephrolepis patulum* Baker.—*N. mexicanum* Hooker.

**NEPHROLEPIS** Schott.

Indusium reniform, fixed at sinus or at arcuate base, opening toward margin of frond; sori at end of free veins. Trop-

ical, 7 sp.

**N. EXALTATA** Schott.

Stipes tufted, 4-6' long, naked or slightly scaly; fronds 1-6' long, 3-6' broad; pinnae close, lanceolate-edge entire or slightly crenate, upper side auricled at base, lower rounded; rachis nearly naked; sori submarginal; indusia firm, distinctly reniform. Fla. Synonyms: *Polypodium exaltatum* L, sp Pl ed 2, 1548 (1763).—*Aspidium trifoliatum* Swz, Schrad J bot 1800 (2): 32 (1801). Frequent in cult.

**N. BISEBRATA** Schott, Gen Fil 1834.

Stipes tufted, 4-8' long, naked or slightly scaly; fronds 2-4' long, 8-12' broad; pinnae 4-8' long, ½-1' broad, acute entire or slightly crenate, upper side auricled, lower rounded at base; rachis and both sides nearly naked; sori submarginal; indusia suborbicular, subpeltate. Fla (south bank of Miami river, Holden). Synonyms: *N. acuta* Presl. Tent Pterid 79 (1836).—*Aspidium acutum* Swz, Syn Fil 46 (1806).—*A. biserratum* Swz, Schrad J bot 1800 (2): 32 (1801).

**FILIX** Adans, Fam Pl 2:20 (1763). *Cystopteris* Bernh.

Indusium convex, com reflected as sporangia ripen; texture delicate.

\*Fronds ovate-lanceolate, 2-3-pinnate. **F. BULBIFERA** Underwood, Our Native Ferns, ed 6, 119 (1900).

Bladder fern. Stipes 4-6' long; fronds lanceolate, elongate, 1-2' long, 2-3' pinnatifid, pinnae lanceolate-oblong; pinnales crowded, toothed or pinnatifid; rachis wingless, often bearing bulblets underneath; indusia short, truncate on free side. Alk; Can; Ia; NC; Ark; Ala. Synonyms: *Aspidium bulbiferum* Swz.—*Nephrodium bulbiferum* Michx.—*Polypodium bulbiferum* L, Sp Pl 1091 (1753).—*Cystopteris bulbifera* Bernh, Schrad Neues J bot 1 (2): 26 (1806).

**F. FRAGILIS** Underwood, Our Native Ferns ed 6, 119 (1900).

Fronds oblong-lanceolate, 4-8' long, 1-2½' broad, 2-3-pinnate; pinnae and pinnales lanceolate or ovate in outline, decurrent along margined or winged rachis; indusia tapering or acute at free end. Labrador; Alk; Cal; Ar; Ala; Ga. Synonyms: *Aspidium tenue* Swz.—*Polypodium fragile* L, sp Pl 109 (1753).—*Cystopteris fragilis* Bernh, Schrad Neues J bot 1 (2): 27 (1806).—and many varietal names.

\*\*Fronds deltoid-ovate, 3-4-pinnate.

**F. MONTANA** Underwood. Our Native Ferns ed 6, 119 (1900).

Rtstock long, slender, creeping; stipes 6-9' long, slender; fronds 6' each way; lowest pinnae deltoid-lanceolate, much larger than those above, their inferior pinnales 1-1½' long; segs cut to rachis into oblong lobes, deeply and sharply toothed; sori num. Labrador; Colo; Alk; BC. Synonyms: *Polypodium montanum* Lam, Fl Franc 1:23 (1778).—*Cystopteris montana* Bernh, Schrad Neues J bot 1 (2): 26 (1806).

**ONOCLEA** L, sp Pl 1062 (1753).

Sori dorsal on veins of contracted pinnae, concealed by their revolute mar-

gins; veins of sterile frond copiously anastomosing.

**O. SENSIBILIS** L, sp Pl 1062 (1753).

Sensitive fern; Oak-leaved fern. Fertile fronds bipinnate, much contracted; pinnales short, com rolled up and converted into berry-shaped closed involucre, and forming a 1-sided panicle; sterile fronds broadly triangular, deeply pinnatifid into lanceolate-oblong pinnae, which are entire, undulate, or lowest pair sinuate pinnatifid; veins copiously anastomosing. Can; Fla; Kans; Nebr; La.

Variety **OBTUSILOBATA** Torrey.

Sterile fronds again pinnatifid, more or less contracted and revolute, and bear a few sori; fertile fronds more or less foliose.

**MATTEUCCIA** Todaro, Syn Pl Acot Vasc Sicilia 30 (1866).

Veins all free, oft included in Onoclea (section *Struthiopteris* Willd.)

**M. STRUTHIOPSIS** Todaro, Syn Pl Sicilia 30 (1866).

Ostrich fern. Fertile fronds 1-1½' long, simply pinnate with necklace-shaped pinnae formed of strongly revolute margins; sterile fronds 2-6' long, growing in a crown, broadly lanceolate, bipinnatifid, lowest pinnae gradually much shorter; veins pinnate, free and simple; sori crowded and confluent. Nova Scotia; Va; Ia; BC. Synonyms: *Onoclea struthiopteris* Hoffm. Deutsch Fl 2:11 (1795).—*O. germanica* Willd.—*O. nodulosa* Michx.—*Struthiopteris pennsylvanica* Willd.—*S. germanica* Willd. Enum Pl Hort bot Berol 1071 (1809).—*Osmunda struthiopteris* L, sp Pl 1066 (1753).

**Genus WOODSIA** R. Brown.

Prodr Fl Nov Holl 1:158 (1810).

Indusium roundish or stellate, delicate, cleft into irregular lobes. Named for Joseph Woods, an English botanist; 15 sp, high temperate or boreal.

Section **EUWOODSIA** Indusium minute or evanescent, open and flat from an early stage, concealed under sorus, its margin cleft into slender hairs or cili.

\*Stipes obscurely jointed near base; cilia of indusium long, inflexed over sporangia.

I.—Fronds thickly clothed beneath with rusty bristle-like chaff.

**W. ILVENSIS** R. Br, Prodr Fl Nov Holl 1:153 (1810).

Rusty Woodsia. Fronds broadly lanceolate, smoothish above, pinnate; pinnae crowded, sessile, pinnately-parted, crowded segs oblong, obscurely crenate; sori near margin, somewhat confluent in age. Va; Ky; NC; Alk; Greenland; Minn. Synonyms: *Acrostichum ilvensis* L. Sp Pl 1071 (1753).—*Polypodium ilvense* Swz.—*Nephrodium rufidulum* Michx.—*Aspidium rufidulum* Willd.—*Woodsia rufidula* Beck.

II.—Fronds glabrous or nearly so.

**W. ALPINA** S. F. Gray, Nat Arr Brit Pl 2:17 (1821).

Alpine woodsia. Stipes and rachis sometimes slightly hairy; fronds linear-lanceolate, pinnate; pinnae cordato-ovate, pinnatifid with 5-7 broadly ob-



vate entire lobes. Vt; NY; Can; Alk; Greenland. Synonyms: *Acrostichum alpinum* Bolton, Fil Brit 76 t 42 (1790).—*A. hyperboreum* Liljeb, Kongl Vetensk Akad. Nya Hendl 14:201 (1793).—*Woodsia hyperborea* R. Br, Prodr Fl Nov Holl 1:158 (1810).

**W. GIABELLA** R. Br.

Smooth and naked throat; fronds linear, tapering slightly below, 2-5' hl, pinnate; pinnae deltoid or ovate, lower rather remote, cut into 3-7 rounded or subcuneate entire lobes. Vt; NY; BC; Alk; Greenland.

\*\*Stipes not jointed; cilia of indusium very short, hidden by sporangia.

**W. SCOPULINA** D. C. Eaton. Can Nat II, 2:90 (1865). B 2:348.

Rtstock short, creeping, very chaffy; stipes 2-4' long, puberulent like rachis and under surface of frond with minute flattened hairs and stalked glands; fronds lanceolate, 4-8' long, pinnate; pinnae num, oblong-ovate, pinnatifid with 10-16 sh ovate or oblg toothed divisions; indusia very delicate, deeply cleft into laciniae which terminate in short hairs. Colo; Ar; Cal; Ore; Alk.

**WOODSIA OREGANA** Eaton.

B 2:348.

Stipes and fronds smooth; fertile fronds taller than sterile ones; pinnae triangular-oblong, pinnatifid; segs oblong or ovate, toothed or crenate; teeth often reflexed and covering submarginal sori; indusia very minute, divided almost to center into a few beaded hairs. Ar; Ut; Colo; Ore; Cal; Wis; Mich; Ok; Nebr; BC, Manitoba.

**WOODSIA MEXICANA** Fee.

7 me Mem Fam Foug 66 (1854).

Stipes 2-3' long, smoothish, or with a few scattered scales; fronds 3-9' long, lanceolate; pinnae sub-opp, triangular-lanceolate, pinnately divided into finely toothed segs, teeth in young fronds ending in delicate, semi-transparent, ciliated tips; sori near margin, broad, confluent; receptacles dot-like, scales of indusium 4, laciniate, narrow, dividing at end into articulated hairs; sporangia nearly sessile. Ar; NM; Baja mts!

Section **HYOPELTIS** Torrey. Indusium conspicuous, at first enclosing sporangium, but early opening at top and splitting into several spreading jagged lobes.

**W. OBTUSA** Torrey, Cat Pl in Geol R NY 195 (1840).

Stipes not jointed, 3-6' long; fronds broadly lanceolate, minutely glandular-hairy, 6-12' hl, nearly bipinnate; pinnae rather remote, triangular-ovate or oblong, pinnately parted; segs oblong, obtuse, crenately toothed, lower ones pinnatifid; veins forked. Nova Scotia; Ga; Ala; Tex; Wis; Nebr; Alk; BC. Synonyms: *Polypodium obtusum* Spreng, Anleit Kennet Gewachse ed 1, 3:92 (1804).—*Woodsia perriniana* H & G.—*Aspidium obtusum* Willd.—*Chellanthus crenata* Kunze.—*Hypopeltis obtusa* Torr.

Variety **PLUMMERAE** Maxon, US Nat Mu pr 23:644 (1901).

Smaller and more glandular. NM; Ar. Synonyms: *W. obtusa glandulosa* D. C. Eaton and Faxon, Torr cl b 9:50 (1882).

—*W. plummerae* Lemmon, bot gaz, 7:6 (1882).

Tribe **DICKSONEAE**. Sori roundish or transversely elongate, borne at ends of veins or on marginal cross-veinlets, with an indusium attached at base or base and sides and opening toward margin of seg.

**DICKSONIA** L'Her.

Sori marginal, small, indusium cup-shaped, somewhat 2-valved, under portion confluent with a lobule of frond. Named for James Dickson, an English botanist; about 50 sp, many arborescent. **D. PILOSIUSCULA** Willd, Enum Pl Hort Berol 1076 (1809).

Rtstock slender, extensively creeping, naked; stripes stout, chaffless; fronds 1-2½' long, 5-9' broad, ovate-lanceolate and pointed, com 3-pinnatifid; pinnae lanceolate, pointed; pinnules cut into oblong and obtuse cut-toothed lobes; rachis and under surface minutely glandular and hairy; sori minute, each on a recurved toothlet, com 1 at upper margin of each lobe. Can; Minn; Tenn; Ga; Ala. Synonyms: *Dicksonia punctiloba* Hooker, sp Fil 1:79 (1846).—*Nephrodium punctilobulum* Michx Fl Bor Am 2:268 (1803).—*Aspidium punctilobulum* Torrey.—*Dennstaedtia punctilobula* Moore, Index Fil xviii (1857).

## MEXICAN FERNS.

Species collected by C. R. Orcutt.

Determinations by W. R. Maxon.

**ADIANTOPSIS RADIATA** (L) Fee.

Orcutt 2930: Sanborn, VC, 23 F 1910.

**ADIANTUM ANDICOLA** Liebm.

Orcutt 4025: Teziutlan, Pue, 7 S 1910.

**ADIANTUM CONCINNUM** Willd.

Orcutt 4639: Alzada, Col, 4 N 1910.

**ADIANTUM PETIOLATUM** Desv.

Orcutt 3:83: Rincon Antonio, Oax, 21 Ap 1910.

Orcutt 3201: Chinameca, VC, 30 Ap 1910.

**ADIANTUM POIRETII** Wikstr.

Orcutt 4298: Churubusco, Mex, 4 O 1910.

Orcutt 3980: Teziutlan, Pue, 6 S 1910.

Orcutt 3842: El Parque, Mor, 31 Ag 1910.

Orcutt 3480: Contreras, Valley of Mexico, 9 Ag 1910.

**ADIANTUM TENERUM** Swartz.

Orcutt 3379: Omealca, VC, 7 Ap 1910.

Orcutt 4692: Tuxpan canyon, Col, 3 N 1910.

**ADIANTUM TRICHOLEPIS** Fee.

Orcutt 4206 et 4207: Rio Balsas, Gro, 26 Ag 1910.

**ADIANTUM VILLOSUM** L.

Orcutt 2988: Sanborn, VC, 10 Mr 1910.

**ALSOPIHILA ARMATA** (Sw) Presl.

Orcutt 3195: Chinameca, VC, 30 Ap 1910.

**ALSOPIHILA MICRODONTA** Desv.

Orcutt 3194: Chinameca, VC, 30 Ap 1910.

**ALSOPIHILA QUADERIPINNATA** (Gmel) C Chr.

Orcutt 3997: Teziutlan, Pue, 7 S 1910.

**ALSOPIHILA SCHIEDIANA** Presl.

Orcutt 3213: Cordova, VC, 6 Ap 1910.

**ANEMIA MEXICANA** Klotzsch.

- Orcutt 4165: Rio Balsas, Gro, 26 Ag 1910.  
**ANEMIA PHILLIPIDIS** (L.) Sw.  
 Orcutt 3378: Cordova, VC, 7 Ap 1910.  
**ASPLENIUM AURITUM** Sw.  
 Orcutt 2827: Jalapa, VC, 10 F 1910.  
**ASPLENIUM CRISTATUM** Lam.  
 Orcutt 3385: Omealca, VC, 7 Ap 1910.  
**ASPLENIUM FORMOSUM** Willd.  
 Orcutt 4638: Alzada, Col, 4 N 1910.  
**ASPLENIUM MONANTHES** L.  
 Orcutt 3791: Cima, Mex, 24 Ag 1910.  
 Orcutt 3482: Contreras, Valley of Mexico, 9 Ag 1910.  
 Orcutt 3987: Teziutlan, Pue, 6 S 1910.  
**ASPLENIUM PRAEMORSUM** Sw.  
 Orcutt 4297: Churubusco, Valley of Mexico, 4 O 1910.  
**ASPLENIUM SERRATUM** L.  
 Orcutt 3271: Rincon Antonio, Oax, 21 Ap 1910.  
**ATHYRIUM** SP.  
 Orcutt 4653: Alzada, Col, 4 N 1910.  
 Orcutt 4013: Teziutlan, Pue, 7 S 1910.  
**BLECHNUM BLECHNOIDES** (Lag) C Chr.  
 Orcutt 3217: Cordova, VC, 6 Ap 1910.  
**BLECHNUM FRAXINEUM** Willd.  
 Orcutt 3207: Cordova, VC, 6 Ap 1910. (?)  
 Orcutt 3384: Rincon Antonio, Oax, 21 Ap 1910.  
**BLECHNUM OCCIDENTALE** L.  
 Orcutt 3981: Teziutlan, Pue, 6 S 1910.  
 Orcutt 2842: Jalapa, VC, 11 F 1910.  
**BLECHNUM SERRULATUM** Rich.  
 Orcutt 3196: Chinameca, VC, 30 Ap 1910.  
**BOMMERIA FEDATA** (Sw) Fourn.  
 Orcutt 4390: El Parque, Mor, 1 S 1910.  
**CEROPTERIS CALOMELAENA** (L) Link.  
 Orcutt 3200: Chinameca, VC, 30 Ap 1910.  
 Orcutt 4694: Tuxpan canyon, Col, 3 N 1910. (?)  
 Orcutt 4701: Tuxpan canyon, Col, 3 N 1910.  
**CEROPTERIS PERUVIANA** (Desv) Link.  
 Orcutt 4699: Tuxpan canyon, Col, 3 N 1910.  
**CEROPTERIS TARTAREA** (Cav) Link.  
 Orcutt 3854: El Parque, Mor, 31 Ag 1910.  
**CHEILANTHES FABINOSA** Kaulf.  
 Orcutt 3854: El Parque, Mor, 31 Ag 1910.  
**CHEILANTHES KAULFUSSII** Kunze.  
 Orcutt 3843: El Parque, Mor, 31 Ag 1910.  
 Orcutt 3646: Tlalpam, Valley of Mexico, 16 Ag 1910.  
**CHEILANTHES LENDIGERA** Sw.  
 Orcutt 3979: Teziutlan, Pue, 6 S 1910.  
**CHEILANTHES MARGINATA** HBK.  
 Orcutt 3503: Contreras, Valley of Mexico, 9 Ag 1910.  
 Orcutt 3642: Tlalpam, Mex, 16 Ag 1910.  
 Orcutt 4654: Alzada, Col, 4 N 1910. (?)  
 Orcutt 3996: Teziutlan, Pue, 6 S 1910.  
**CHEILANTHES MICROMERA** Link.  
 Orcutt 4044: Teziutlan, Pue, 9 S 1910.  
 Orcutt 3648: Olivar, Valley of Mexico, 17 Ag 1910.  
 Orcutt 3373: Cordova, VC, 6 Ap 1910.  
**CHEILANTHES MYRIOPHYLLA** Desv.  
 Orcutt 3927: Pachuca, Hgo, 5 S 1910.  
 Orcutt 3855: El Parque, Mor, 31 Ag 1910.  
 Orcutt 3638: Tlalpam, Valley of Mexico, 16 Ag 1910.  
 Orcutt 3615: Tlalpam, Valley of Mexico, 16 Ag 1910.  
**DICEANOPTERIS BIFIDA** (Willd) Maxon.  
 Orcutt 3203: Chinameca, VC, 30 Ap 1910.  
 Und.  
**DICEANOPTERIS FLEXUOSA** (Schrad)  
 Orcutt 3205: Chinameca, VC, 30 Ap 1910.  
**DICRANOPTERIS PALMATA** (Schaffn) Und.  
 Orcutt 2837: Jalapa, VC, 11 F 1910.  
**DICEANOPTERIS PECTINATA** (Willd) Und.  
 Orcutt 3202: Chinameca, VC, Ap 1910.  
**DIPLAZIUM INAEQUILATERUM** Liebm.  
 Orcutt 3209: Cordova, VC, 6 Ap 1910.  
**DRYOPTERIS ATHYRIOIDES** (M & G) Kuntze.  
 Orcutt 3994: Teziutlan, Pue, 6 S 1910.  
**DRYOPTERIS DAVENPORTI** C Chr.  
 Orcutt 3214: Cordova, VC, 6 Ap 1910.  
**DRYOPTERIS FILIX-MAS** Schott. (Var.)  
 Orcutt 3999: Teziutlan, Pue, 7 S 1910.  
**DRYOPTERIS MENISCOIDES** (Liebm) C Chr.  
 Orcutt 2915: Sanborn, VC, 23 F 1910.  
**DRYOPTERIS PANAMENSIS** (Presl) C Chr.  
 Orcutt 3380: Tezonapa, VC, 5 Ap 1910.  
**DRYOPTERIS PATENS** (Sw) Kuntze.  
 Orcutt 4695: et 4696: Tuxpan canyon, Col, 3 N 1910.  
 Orcutt 4590: Colima, Col, 24 O 1910.  
**DRYOPTERIS PATULA** (Sw) Und.  
 Orcutt 3995: Teziutlan, Pue, 6 S 1910.  
 Orcutt 4393: El Parque, Mor, 1 S 1910.  
 Orcutt 4652 et 4700: Near Alzada, Col, 4 N 1910.  
**DRYOPTERIS SPRENGELII** (Kaulf) Kuntze.  
 Orcutt 2977: Sanborn, VC, 18 Ap 1910.  
**DRYOPTERIS TETRAGONA** (Sw) Urban.  
 Orcutt 3391: Sanborn, VC, 24 F 1910.  
**ELAPHOGLOSSUM**.  
 Orcutt 3984: Teziutlan, Pue, 6 S 1910.  
 Orcutt 3528: Contreras, Valley of Mexico, 9 Ag 1910.  
**FILIX FRAGILIS** (L) Und.  
 Orcutt 3477: Contreras, Valley of Mexico, 9 Ag 1910.  
 Orcutt 3845: El Parque, Mor, 31 Ag 1910.  
 Orcutt 3983: Teziutlan, Pue, 6 S 1910.  
**HYMENOPHYLLUM**.  
 Orcutt 404: Teziutlan, Pue, 7 S 1910.  
**LINDSAYA TRAPEZIFORMIS** Dry.  
 Orcutt Sanborn, VC, 24 F 1910.  
 Orcutt 3204: Chinameca, VC, 30 Ap 1910.  
**LINDSAYA**.  
 Orcutt 3197: Chinameca, VC, 30 Ap 1910.  
**LOPHIDIUM ELEGANS** (Vahl) Presl.  
 Orcutt 2913: Sanborn, VC, 23 F 1910.  
**LYCOPODIUM CERNUUM** L.  
 Orcutt 3198: Chinameca, VC, 30 Ap 1910.  
**LYGODIUM HETERODOXUM** Kuntze.  
 Orcutt 3015: Sanborn, VC, 10 Mr 1910.  
**LYGODIUM MEXICANUM** Presl.  
 Orcutt 3206: Chivela, Oax, 16 Ap 1910.  
 Orcutt 3016: Sanborn, VC, 10 Mr 1910.  
**NOTHOLAENA AFFINIS** (Mett) Hook.  
 Orcutt 3315: Tehuantepec, Oax, 19 Ap 1910.  
**NOTHOLAENA BRACHYPUS** (Kunze) J Sm.  
 Orcutt 4703: Tuxpan canyon, Col, 3 N



1910.  
**NOTHOLAENA CANDIDA** (M & G) Hook.  
 Orcutt 4228: Rio Balsas, Gro, 26 Ag 1910.  
**NOTHOLAENA FERRUGINEA** Desv.  
 Orcutt 3831 et 3852: El Parque, Mor, 31 Ag 1910.  
 Orcutt 3539: Contreras, Valley of Mex, 9 Ag 1910.  
 Orcutt 3616: Tlalpam, Valley of Mexico, 16 Ag 1910.  
**OPHIOGLOSSUM CALIFORNICUM** Prantl.  
 Orcutt 3733: Ajusco, DF, 20 Ag 1910.  
**PELLAEA ANGUSTIFOLIA** (HBK) Baker.  
 Orcutt 4231: El Parque, Mor, 31 Ag 1910.  
**PELLAEA CORDATA** (Cav) J Sm.  
 Orcutt 3853: El Parque, Mor, 31 Ag 1910.  
 Orcutt 3485: Contreras, Valley of Mexico, 9 Ag 1910.  
**PELLAEA INTRAMARGINALIS** (Kaulf) J Sm.  
 Orcutt 4232 et 4233: El Parque, Mor, 31 Ag 1910.  
 Orcutt 3982: Teztlutlan, Pue, 6 S 1910.  
**PELLAEA LOZANI** Maxon.  
 Orcutt 4188: Rio Balsas, Gro, 26 Ag 1910.  
**PELLAEA RIGIDA** Hook.  
 Orcutt 4229: Rio Balsas, Gro, 26 Ag 1910.  
**PELLAEA SKINNERI** Hook.  
 Orcutt 4672: Alzada, Col, 4 N 1910.  
 Orcutt 4191: Rio Balsas, Gro, 26 Ag 1910.  
**PELLAEA TERNIFOLIA** Cav.  
 Orcutt 3827: El Parque, Mor, 31 Ag 1910.  
**POLYPODIUM PLEBIUM** C & S.  
 Orcutt 4032: Teztlutlan, Pue, 7 S 1910.  
 Orcutt 3484: Contreras, Valley of Mexico, 9 Ag 1910.  
 Orcutt 2806: Jalapa, VC, 10 F 1910.  
**POLYPODIUM PLUMULA** HBK.  
 Orcutt 2819: Jalapa, VC, 10 F 1910. (?)  
**POLYPODIUM ANGUSTIFOLIUM** Swartz.  
 Orcutt 3992: Teztlutlan, Pue, 6 S 1910.  
 Orcutt 2828: Jalapa, VC, 10 F 1910.  
 "Lengua de cerbo."  
 Orcutt 2994: Sanborn, VC, 10 Mr 1910.  
**POLYPODIUM FLEIOSOBUM** Kunze.  
 Orcutt 3377: Cordova, VC, 7 Ap 1910.  
 Orcutt 2838: Jalapa, VC, 11 F 1910.  
 Orcutt 2830: Jalapa, VC, 10 F 1910.  
 "Pesma."  
**POLYPODIUM SQUAMATUM** L.  
 Orcutt 2839: Jalapa, VC, 11 F 1910.  
**POLYPODIUM LANCEOLATUM** L.  
 Orcutt 3993: Teztlutlan, Pue, 6 S 1910.  
 Orcutt 3844: El Parque, Mor, 31 Ag 1910.  
 Orcutt 3483: Contreras, Valley of Mexico, 9 Ag 1910.  
 Orcutt 2841: Jalapa, VC, 11 F 1910. (?)  
**POLYPODIUM LATUM** Moore.  
 Orcutt 2952: Sanborn, VC, 28 F 1910.  
**POLYPODIUM FURFURACEUM** C & S.  
 Orcutt 4637: Alzada, Col, 4 N 1910.  
 Orcutt 3208: Cordova, VC, 6 Ap 1910.  
**POLYPODIUM XALAPENSIS** (Fee) Moore.  
 Orcutt 3212: Cordova, VC, 6 Ap 1910.  
**POLYPODIUM ELONGATUM** Mett.  
 Orcutt 3215: Cordova, VC, 6 Ap 1910.  
**POLYPODIUM FALLAX** C & S.  
 Orcutt 3216: Cordova, VC, 6 Ap 1910.  
**POLYPODIUM CRASSIFOLIUM** L.  
 Orcutt 3372: Cordova, VC, 6 Ap 1910.  
**POLYPODIUM POLYPODIODES** (L) Hitchc.  
 Orcutt 3374: Cordova, VC, 6 Ap 1910.  
 Orcutt 4023: Teztlutlan, Pue, 7 S 1910.  
**POLYPODIUM LYCOPODIODES** L.  
 Orcutt 3389: Sanborn, VC, 24 F 1910.  
**POLYPODIUM THYSANOLEPIS** A. Br.  
 Orcutt 3933: Pachuca, Hgo, 5 S 1910.  
 Orcutt 3647: Oliver, Valley of Mexico, 17 Ag 1910.  
**POLYPODIUM SUBPOTIOLATUM** Hook.  
 Orcutt 4084: El Parque, Mor, 3 S 1910.  
**PTERIDIUM AQUILINUM** (L) Kuhn (form).  
 Orcutt 4029: Teztlutlan, Pue, 7 S 1910.  
**PTERIDIUM CAUDATUM** (L) Maxon.  
 Orcutt 3392: Sanborn, VC, 24 F 1910.  
**PTERIS CRETICA** L.  
 Orcutt 4028: Teztlutlan, Pue, 7 S 1910.  
**PTERIS FUNGENS** Willd.  
 Orcutt 3376: Omeaca, VC, 7 Ap 1910.  
 Orcutt 3388: Sanborn, VC, 24 F 1910.  
**PTERIS QUADRILOBATA** Retz.  
 Orcutt 3390: Sanborn, VC, 24 F 1910.  
**PTERIS SPINOSA** (L) Desv.  
 Orcutt 2978: Sanborn, VC, 18 Ap 1910.  
**TECTARIA DILACERATA** (Kunze).  
 Orcutt 3210: Cordova, VC, 6 Ap 1910.  
**TECTARIA HERACLEIFOLIA** (Willd) Und.  
 Orcutt 3119: Tezonapa, VC, 5 Ap 1910.  
**TECTARIA MARTINICENSIS** (Spreng) Copel.  
 Orcutt 2979 et 3011: Sanborn, VC, Mr et Ap 1910.  
**TRICHOMANES PINNATUM** Hedw.  
 Orcutt 3198: Chinameca, VC, 30 Ap 1910.  
**WOODSIA MEXICANA** Fee.  
 Orcutt 3931: Pachuca, Hgo, 5 S 1910.  
**WOODSIA MOLLIS** (Kaulf) J Sm.  
 Orcutt 3621: Tlalpam, Valley of Mexico, 16 Ag 1910.

# MEXICAN GRASSES.

Collected in Mexico by C. R. Orcutt during 1910, and determined by Dr. A. S. Hitchcock, of the United States Department of Agriculture.

- AEGOPOGON GEMINIFLOREUS** HBK.  
 Orcutt 4248: Xochimilco, DF, 3 O 1910.  
 Orcutt 3925: Pachuca, Hgo, 5 S 1910.  
**AGROSTIS HIEMALIS** subsp.  
 Orcutt 3953: Teztlutlan, Pue, 6 S 1910.  
 Orcutt 3744 et 4441: Tres Marias, Mex, 23 Ag 1910.  
**AGROSTIS TOLUCENSIS** HBK.  
 Orcutt 3789: Cima, Mex, 24 Ag 1910.  
**ANDROPOGON BARBINODIS** Lag.  
 Orcutt 3687: S Angel, DF, 18. Ag 1910.  
**ANDROPOGON BREVIFOLIUS** Sw.  
 Orcutt 4681: Alzada, Col, 4 N 1910.  
**ANDROPOGON INCOMPLETUS** Presl.  
 Orcutt 4707: Tuxpan canyon, Col, 3 N 1910.  
**ANDROPOGON**  
 Orcutt 4632: Alzada, Col, 4 N 1910.  
**ANTHOPHORA XERMAPHRODITA** (L)

Kuntze.

Orcutt 4567: Colima, Col, 24 O 1910, 4709; Tuxpan canyon, Col, 3 N 1910.

**ARESTIDA BROMOIDES** HBK.

Orcutt 4130: Telles, Hgo, 21 S 1910.

**ARESTIDA HUMBERTIANA** Trin & Rupr.

Orcutt 3676: Olivar, DF, 17 Ag 1910.

**ARESTIDA MANZANILLOANA** Vasey.

Orcutt 4569: Colima, Col, 24 O 1910.

**ARESTIDA SCABRA** Kunth.

Orcutt 4633: Alzada, Col, 4 N 1910.

Orcutt 4463: Manzanillo, Col, 20 O 1910.

**ARESTIDA TRINII** Scribn.

Orcutt 3863: Alarcon, Mor, 31 Ag 1910.

Orcutt 3732: Ajusco, DF, 20 Ag 1910.

**ARUNDINELLA DEFFEANA** Nees.

Orcutt 3062: Sanborn, VC, 4 Mr 1910.

**BLEPHARONEURON TRICHOLEPIS**

(T) Nash.

Orcutt 3796: Cima, Mex, 24 Ag 1910.

**BRACHIARIA MEZIANA** Hitchc.

Orcutt 3692: S Angel, DF, 18 Ag 1910.

**BRACHIARIA PLANTAGINEA** (Link) Hitchc.

Orcutt 4616: Colima, Col, 24 O 1910.

Orcutt 3890: Cuernavaca, Mor, 31 Ag 1910.

**BRACHYPODIUM MEXICANUM** Link.

Orcutt 4005: Teztlutlan, Pue, 7 S 1910.

Orcutt 3738: Tres Marias, Mex, 23 Ag 1910.

**BROMUS LACINIATUS** Beal.

Orcutt 3722: Ajusco, DF, 19 Ag 1910.

**BROMUS PROXIMUS** Shear.

Orcutt 4037: Teztlutlan, Pue, 7 S 1910.

**BULBILIS DACTYLOIDES** (Nutt) Rafin.

Orcutt 4148: Telles, Hgo, 21 S 1910.

**BOUTELOUA BROMOIDES** (HBK) Lag.

Orcutt 3885: Cuernavaca, Mor, 31 Ag 1910.

Orcutt 3675: Olivar, DF, 17 Ag 1910.

**BOUTELOUA CURTIPENDULA** (Michx) T.

Orcutt 3666: Olivar, DF, 17 Ag 1910.

3690: S Angel, DF, 18 Ag 1910.

**BOUTELOUA FILIFORMIS** Fourn.

Orcutt 4568: Colima, Col, 24 O 1910.

Orcutt 3255: Coatzacoalcos, VC, 21 Mr 1910.

**BOUTELOUA OLIGOSTACHYA** (Nutt) T.

Orcutt 3641: Tlalpam, DF, 16 Ag 1910.

**BOUTELOUA PROSTRATA** Lag.

Orcutt 4153: Telles, Hgo, 21 S 1910.

Orcutt 3903: Pachuca, Hgo, 5 S 1910.

Orcutt 3608: Olivar, DF, 15 Ag 1910.

**BOUTELOUA REPENS** HBK.

Orcutt 4459: Manzanillo, Col, 20 O 1910.

**BOUTELOUA SCORPIOIDES** Lag.

Orcutt 4107: Mexico, DF, 20 S 1910.

**CATHESTECHUM STOLONIFERUM**

Orcutt 4166: Rio Balsas, Gro, 26 Ag 1910.

**CENCHRUS CAROLINIANUS** Walt.

Orcutt 4446: Tecoman, Jal, 20 O 1910.

**CENCHRUS VIVIDUS** Spreng.

Orcutt 3074: Sanborn, VC, 10 Mr 1910.

**CHAETOCHELOA GRISEBACHII** S & M.

Orcutt 4428: Las Amates, Mor, 25 Ag 1910.

Orcutt 4481: Manzanillo, Col, 20 O 1910.

Orcutt 4342: Xochimilco, DF, 6 O 1910.

Var: **AMPLA** S & M.

Orcutt 3697: S Angel, DF, 18 Ag 1910.

**CHAETOCHELOA IMBERBIS** (Poir) Scribn.

Orcutt 4624: Alzada, Col, 4 N 1910.

Orcutt 3613: Olivar, DF, 15 Ag 1910.

Orcutt 3237: Sanborn, VC, 24 F 1910.

Orcutt 3534 et 3535 Contreras, DF, 9 Ag 1910.

Orcutt 3861: El Parque, Mor, 31 Ag 1910.

**CHAETOCHELOA SETOSA** (Sw) Scribn.

Orcutt 4194: Rio Balsas, Gro, 26 Ag 1910.

**CHLORIS ELEGANS** HBK.

Orcutt 4374 et 4438: SFe, Mor, 25 Ag 1910.

Orcutt 3693: S Angel, DF, 18 Ag 1910.

**CHLORIS RADIATA** Sw.

Orcutt 3242: Sanborn, VC, 10 Mr 1910.

**CHLORIS SUBMUTICA** HBK.

Orcutt 3690: S Angel, DF, 18 Ag 1910.

**CINNA POAEFORMIS** (HBK) S & M.

Orcutt 3790: Cima, Mex, 24 Ag 1910.

**DACTYLOCTENIUM AEGYPTIUM** (L) Richt.

Orcutt 3258: Coatzacoalcos, VC, 21 Mr 1910.

Orcutt 4452: Tecoman, Jal, 20 O 1910.

Orcutt 2896: Vera Cruz, VC, 16 F 1910.

**DESCHAMPSIA**.

Orcutt 3740: Tres Marias, Mex, 23 Ag 1910.

**DISTICHLIS SPICATA** (L) Greene.

Orcutt 4110: Mexico, DF, 20 S 1910.

**ECHINOCHLOA CRUSGALLI** (L) Beauv.

Orcutt 4105: Mexico, DF, 20 S 1910.

**ELEUSINE INDICA** (L) Gaertn.

Orcutt 3050 et 3056: Sanborn, VC, 5 et 8 Mr 1910.

Orcutt 4248: Xochimilco, DF, 3 O 1910.

Orcutt 4542 et 4615: Colima, Col, 24 O 1910.

**EPICAMPES ROBUSTA** Fourn.

Orcutt 4317: Churubusco, DF, 4 O 1910.

**ERAGROSTIS CILIARIS** (L) Link.

Orcutt 3239: Sanborn, VC, 10 Mr 1910.

Orcutt 2895: Vera Cruz, VC, 16 F 1910.

Orcutt 4586: Colima, Col, 24 O 1910.

**ERAGROSTIS ELLIOTII** Wat.

Orcutt 3251: Vera Cruz, VC, 28 Mr 1910.

**ERAGROSTIS LIMBATA** Fourn.

Orcutt 3253: Omealca, VC, 7 Ap 1910.

3254: Cordova, VC, 6 Ap 1910. 4149:

Telles, Hgo, 21 S 1910. 3948: Oriental, Pue, 6 S 1910. 3594: Olivar, DF, 15 Ag 1910.

**ERAGROSTIS LUGENS** Nees.

Orcutt 3694: S Angel, DF, 18 Ag 1910.

**ERAGROSTIS MAYPURENSIS** (HBK) Steud.

Orcutt 3103: Coatzacoalcos, VC, 21 Mr 1910.

**ERAGROSTIS MEXICANA** Link.

Orcutt 3532: Contreras, DF, 9 Ag 1910.

3696: S Angel, DF, 18 Ag 1910.

**ERAGROSTIS FILOSA** L.

Orcutt 4111: Mexico, DF, 20 S 1910.

Orcutt 3884: Cuernavaca, Mor, 31 Ag 1910.

**ERAGROSTIS SECUNDIFLORA** Presl.

Orcutt 3250: Vera Cruz, VC, 28 Mr 1910.

**FESTUCA AMPLISSIMA** Rupr.

Orcutt 3743: Tres Marias, Mex, 23 Ag 1910.

Orcutt 3773: Cima, Mex, 24 Ag 1910.

**FESTUCA HEPHAESTOPHILA** Nees.

Orcutt 3775: Cima, Mex, 24 Ag 1910.

**FESTUCA MYUROS** L.

Orcutt 3804: Parres, Mex, 30 Ag 1910.

Orcutt 3860: El Parque, Mor, 31 Ag 1910.



**FESTUCA TOLUCENSIS** HBK.

Orcutt 3748: Tres Marias, Mex., 23 Ag 1910.

**ALCALIA CENCHOIDES** HBK.

Orcutt 3591: Olivar, DF, 15 Ag 1910.

**KOMALOCENCREUS HEXANDREUS**

(Sw) Kuntze.

Orcutt 4219: Churubusco, DF, 4 O 1910.

**ROSEUM JUBATUM** L.

Orcutt 4101: Mexico, DF, 20 S 1910.

**HYMENACHNE AMPLEXICAULIS**

(Kudze) Nees.

Orcutt 4563: Colima, Col., 24 O 1910.

Orcutt 3249: Sanborn, VC, 10 Mr 1910.

**IMPERATA HOOKERI** Rupr.

Orcutt 3075: Sanborn, VC, 12 Mr 1910.

**LOPHOBUS FRINGELI** Scribn.

Orcutt 4407: Near Trinita, Mor., 25 Ag 1910.

**LEPTOCHLOA DUBIA** (HBK) Nees.

Orcutt 3917: Pachuca, Hgo., 5 S 1910.

Orcutt 3631: S Angel, DF, 18 Ag 1910.

**LEPTOCHLOA MUCRONATA** (Michx.)

Kunth.

Orcutt 4193: Rio Balsas, Gro., 26 Ag 1910.

Orcutt 4478: Manzanillo, Col., 20 O 1910.

Orcutt 4371: Sfe, Mor., 25 Ag 1910.

**LEPTOCHLOA VIRGATA** (L) Beauv.

Orcutt 3240: Sanborn, VC, 10 Mr 1910.

**LYCURIUS PELEOIDES** HBK.

Orcutt 4308: Churubusco, DF, 4 O 1910.

Orcutt 3606 et 3677: Olivar, DF, 15 et 17 Ag 1910.

**MICROCHLOA SETACEA** R Br.

Orcutt 3592: Olivar, DF, 15 Ag 1910.

4135: Telles, Hgo., 21 S 1910.

**MUHLENBERGIA AFFINIS** Trin.

Orcutt 4305: Churubusco, DF, 4 O 1910.

**MUHLENBERGIA CILIATA** Trin.

Orcutt 4247: Xochimilco, DF, 3 O 1910.

**MUHLENBERGIA ELATA** Vasey.

Orcutt 4649: Alzada, Col., 4 N 1910.

**MUHLENBERGIA EXILIS** Fourn.

Orcutt 4571: Colima, Col., 24 O 1910.

**MUHLENBERGIA IMPLICATA** (HBK)

Trin.

Orcutt 4307: Churubusco, DF, 4 O 1910.

Orcutt 3915: Pachuca, Hgo., 5 S 1910.

**MUHLENBERGIA NEBULOSA** Scribn.

Orcutt 4629: Alzada, Col., 4 N 1910.

**MUHLENBERGIA SCHAFFNERI**

Fourn.

Orcutt 4311: Churubusco, DF, 4 O 1910.

**OPLISMENUS CRISTATUS** Presl.

Orcutt 4529: Colima, Col., 24 O 1910.

**OPLISMENUS HIETELLUS** (L) R & S.

Orcutt 3067: Sanborn, VC, 28 F 1910.

**ORTHOCLADA RARIFLORA** Beauv.

Orcutt 2932: Sanborn, VC, 23 F 1910.

**PANICUM ARIZONICUM** S & M.

Orcutt 4195: Rio Balsas, Gro., 26 Ag 1910.

**PANICUM BULBOSUM** HBK.

Orcutt 3518: Contreras, DF, 9 Ag 1910.

**PANICUM ELEPHANTIPES** Nees.

Orcutt 4269: Churubusco, DF, 4 O 1910.

**PANICUM GOVINI** Fourn.

Orcutt 4890: Coatzacoalcos, VC, 21 Mr 1910.

**PANICUM HIBTICAULE** Presl.

Orcutt 4197: Rio Balsas, Gro., 26 Ag 1910.

**PANICUM LAXUM** Sw.

Orcutt 3238: Sanborn, VC, 28 F 1910.

**PANICUM PARCUM** H & C.

Orcutt 4687: Alzada, Col., 4 N 1910.

**PANICUM REPTANS** L.

Orcutt 4888: Tezonapa, VC, 5 Ap 1910.

**PANICUM SPHAEROCARPON** Ell.

Orcutt 3952: Teztlutlan, Pue., 6 S 1910.

**PANICUM TRICHODES** Sw.

Orcutt 4515: Colima, Col., 24 O 1910.

Orcutt 3241: Sanborn, VC, 10 Mr 1910.

**PANICUM UNGINATUM** Radoll.

Orcutt 4889: Tezonapa, VC, 5 Ap 1910.

**PASPALUM CONJUGATUM** Berg.

Orcutt 4585: Colima, Col., 24 O 1910.

Orcutt 3248: Sanborn, VC, 4 Mr 1910.

**PASPALUM DEELE** Michx.

Orcutt 2891: Vera Cruz, VC, 16 F 1910.

**PASPALUM INOPS** Vasey.

Orcutt 3889: Cuernavaca, Mor., 31 Ag 1910.

**PASPALUM ORBICULATUM** Polr.

Orcutt 3245: Sanborn, VC, 5 Mr 1910.

**PASPALUM PANICULATUM** L.

Orcutt 3246: Sanborn, VC, 5 Mr 1910.

**PHALARIS CANARIENSIS** L.

Orcutt 3695: S Angel, DF, 18 Ag 1910.

**PHARUS PARVIFOLIUS** Nash.

Orcutt 3236: Sanborn, VC, 24 F 1910.

**POA ANNUA** L.

Orcutt 3858: El Parque, Mor., 31 Ag 1910.

**SCLEROPOGON BREVIFOLIUS** Phil.

Orcutt 4143: Telles, Hgo., 21 S 1910.

**SETARIOPSIS LATIGLUMIS** (Vas)

Scribn.

Orcutt 4198: Rio Balsas, Gro., 26 Ag 1910.

**SPOROBOLUS ARGUTUS** (Nees)

Kunth.

Orcutt 4106: Mexico, DF, 20 S 1910.

**SPOROBOLUS INDICUS** (L) R Br.

Orcutt 3533: Contreras, DF, 9 Ag 1910.

Orcutt 4036: Teztlutlan, Pue., 7 S 1910.

Orcutt 3678: Olivar, DF, 17 Ag 1910.

Orcutt 3234: Rincon Antonio, Oax., 21 Ap 1910.

**STIPA ICHU** (R & P) Kunth.

Orcutt 3788: Cima, Mex., 24 Ag 1910.

**STIPA VIRESCENS** HBK.

Orcutt 3731: Ajusco, DF, 20 Ag 1910.

**STIPA VIELDULA** Trin.

Orcutt 3947: Oriental, Pue., 6 S 1910.

**STREPTOGYNE CRINITA** Beauv.

Orcutt 2933: Sanborn, VC, 23 F 1910.

**SYNTHESISMA DIGITATA** (Sw)

Hitche.

Orcutt 4541: Colima, Col., 24 O 1910.

**SYNTHESISMA SANGUINALIS** (L)

Dulac.

Orcutt 3244: Sanborn, VC, 5 Mr 1910.

Orcutt 4473: Manzanillo, Col., 20 O 1910.

**TRACRYPOGON MONTUPARI** (HBK)

Nees.

Orcutt 4322: Churubusco, DF, 4 O 1910.

**VALOTA INSULARIS** (L) Chase.

Orcutt 3070: Sanborn, VC, 11 Mr 1910.

**MEXICAN LICHENS.**

Determined by Dr. H. E. Hasse.

**ACAROSPORA BELLA** (Nyl) Hepr.

A: xanthophana (Nyl).

Orcutt 4849 et 4869: Aguascalientes, Ags.,

7 D 1910.

**ACARASPORA.**

Orcutt 4715: Cardenas, SLY, on calcar-

eous rock, N 1910.

**ARTHONIA ARMORICANA** Nyl.

Orcutt 4771: Salina Cruz, Oax.

**ARTHONIA COMPENSATA** Nyl.

Orcutt 4765: Jaltipan, VC, in Hasse herb.

**ARTHONIA DISPERSELLA** Mull Arg.

Orcutt 4769: Salina Cruz, Oax.

**ARTHONIA MELANOPHTHALMA** Desf

Orcutt 4756: Ojapa, VC, on bark.

**ARTHONIA VARIA** (Ach) Nyl.

Orcutt 4825 et 4864: Cardenas, SLP, N

1910.

**ARTHOPYRENIA CONOIDEA** (Fr) A.

Zahlbrucker.

Orcutt 4843: Villar, SLP, N 1910.

**ARTHOPYRENIA.**

Orcutt 4844: Aguascalientes, Ags, N 1910.

**BACIDIA ENDOLEUCA** (Nyl) Gickx.

*Biatora atrogrisea* (Delis) Hepp.

Orcutt 4757: Ojapa, VC, 30 Je 1910.

**BAEOMYCES FUNGOIDES** Ach.

Orcutt 4755: El Parque, Mor, in Hasse herb.

**BIATORA CRENATA** (Tayl Nyl) Tuck.

Orcutt 4716 et 4839: Cardenas, SLP, N

1910.

**BIATORA ICTERICA** Mont.

Orcutt 4798: Telles, Hgo.

**BIATORA.**

Orcutt 4857: Near Belleville, Oax, on bark.

Orcutt 4797: Telles, Hgo.

**BIATORELLA PRUINOSA** (Sw) Mull.

Orcutt 4841 et 4875: Aguascalientes, Ags, 7 D 1910.

Orcutt 4714 et 4816: Cardenas, SLP, N 1910.

**BIATORELLA SIMPLEX** (Dav) Br & Roster.

Orcutt 4855: Aguascalientes, Ags, 7 D 1910.

**BLASTENIA FLORIDANA** Tuck.

Orcutt 4814: Villar, SLP, in Hasse herb.

**BLASTENIA ORCUTTI** Hasse.

(Hasse, W 18:60.)

Thallus thin of a gamboge or rich yellow color, smoothish, determinate, finely rimose, limited by a narrow black hypothalline border; apothecia sessile and elevated sessile, from 0.5-1.0 cm wide, disk flat to plano-convex, orange-red, with a suburgid, entire or slightly crenate and elevated margin, somewhat lighter in color than the disk; with Iod the disk stains purple, its margin and the thallus are not affected. Epithecium granulose, faint straw color; thecium colorless, 64-84 mic hi; paraphyses loosely agglutinated, barely thickened above; hypothecium colorless; asci clavate and subinflated clavate, 62 mic lg, 16 mic thick, the membrane thickened above; spores 8, polari bilocular, 12 mic lg, 6 mic thick, the loculi are small with a lg connecting tube, but few of the asci are seen with spores and these are ill defined; hymenial gelatine with Iod, a deep blue, KHO stains the epithecium carmine, thecium and hypothecium are not affected; spermatogones not seen. The bright yellow-green protococcus gonidia are 8-12 mic in diam.—H. E. Hasse (original).

On calcareous rock, Lagunas, Oax, Mexico, C. R. Orcutt, 1910.

Tho abundant, the material available for examination was scanty, type in Hasse herb.

**BOMBYLIOSPORA TUBERCULOSA**

(Fee) Mass.

Orcutt 4862: Near Belleville, Oax.

**BUELLIA HALONIA** (Ach) Tuck.

Orcutt 4802: Colima, Col.

**BUELLIA LEPTOCLINOIDES** Nyl.

Orcutt 4848: Cardenas, SLP, N 1910.

**BUELLIA MYRIOCARPA** (DC) Mudd.

Orcutt 4851: Aguascalientes, Ags, 7 D 1910, on mesquite.

**BUELLIA PARASEMA** (Ach) Koerb, Syst Lich 228 (1855).

Variety **VULGATA** Th Fr.

Orcutt 4824: Cardenas, SLP, N 1910.

**BUELLIA BINODINOIDES** Ang.

Orcutt 4751: Ajusco, DF.

**CALOPLACA AURANTIACA** (Lightf)

Orcutt 4846: Aguascalientes, Ags, in Hasse herb.

Orcutt 4762: Ojapa, VC.

Var: **ALBA** (Nyl).

Th Fr.

Orcutt 4718: Tehuantepec, Oax, on bark.

**CALOPLACA BOLACINA** (Tuck) Herre

(L. Fl, Santa Cruz Penine. 233, 1810).

Orcutt 4854 et 4865: Aguascalientes, Ags, 7 D 1910.

**CALOPLACA CALOPISMA** (Ach) Th Fr.

Var: **RADIATA** Th Fr.

Orcutt 4712 et 4804: Cardenas, SLP, N 1910, on calcareous rock.

**CALOPLACA EUGYRA** (Tuck).

Orcutt 4874: Villar, SLP, N 1910.

Orcutt 4870: Cardenas, SLP, N 1910, in Hasse herb.

(*Plarodium cugyrum* Tuck. Syn N. A. hi T, 171).

**CALOPLACA MICOPHYLLINA** (Tuck).

(*Placodium* Tuck, Syn. N. A. hi I, 174).

Orcutt 4789: Salina Cruz, Oax.

**CALOPLACA MURORUM** (Hoffm) Th Fr.

Orcutt 4811: Villar, SLP, in Hasse herb.

Orcutt 4718: Cardenas, SLP, N 1910.

Var: **MINIATA** Th Fr.

**CANDELARIA CONCOLOR** (Dicks)

Wain.

Orcutt 4792: Salina Cruz, Oax.

**CHIODECTON SANGUINEUM** (Sw.)

Wainio.

Orcutt 4837: Alzada, Col, 4 N 1910.

**CLADONIA CARIOSA** (Ach) Spreng.

Orcutt 4746: Ajusco, DF.

**CLADONIA DECORTICATA** (Flk)

Spreng.

Orcutt 4786: Idins Cruz, Oax, in Masse herb.

**CLADONIA FIMBRIATA** (L.) E. Fr.

Var: **FIBULA** Nyl.

Orcutt 4799: Telles, Hgo, in Hasse herb.

Var: **CONISTA** Ach. T.

Orcutt 3728: Ajusto Mex, 20 Ag. 1910, in Hasse herb.

Var: **BORBONICA** (Del) Wainio.

Orcutt 4767: Jaltipan, VC.

**CLADONIA FITYREA** Flk.

Orcutt 4747: Ajusco, DF, 20 Ag 1910.

**CLADONIA PYXIDATA** (L.) Fr.

Var: **CHLOROPHAEA** Flk.

Orcutt 4879: Ajusco, Mex, 20 Ag 1910.

**COCCOCARPUS MOLYBDAEA** Pers.

Var: **INCISA** (Nyl.)

Orcutt 4868 et 4842: Alzada, Col, N 1910.



**DERMATOCARPON HEPATICUM** (Ach)

A Zahlbr.

Orcutt 4836: Cardenas, SLP, N 1910.

**DERMATOCARPON.**

Orcutt 4810: Villar, SLP, N 1910. (?)

**EVERNIA PURPUREACEA** (L) Mann.

Orcutt 4774: Teztlutlan, Puebla, S 1910.

**GRAPHINA VIRGINEA** Mull Arg.

Orcutt 4887: Lagunas, Oax, on bark, in Hasse herb. (?)

**GRAPHIS ATZELLI** Ach.

Orcutt 4838: Alzada, Col, 4 N 1910.

Orcutt 4766 et 4876: Jaltipan, VC, 5 JI 1910.

**GYROPHORA HIRSUTA** Ach.Var: **PAPYRIA** Ach.

Orcutt 4808: Villar, SLP, N 1910.

**HETEROTHECIUM VULPINUM** Tuck.

Lopadium vulpinum (Tuck).

Orcutt 4860: Near Belleville, Oax, on bark.

**LECANORA ALLOPHANA** Nyl.

Orcutt 4821 et 4867: Cardenas, SLP, N 1910.

**LECANORA CALCAREA** (L) Nyl.

Orcutt 4826 et 4873: Cardenas, SLP, N 1910.

Known from Africa, Europe, and throughout N. Am.

**LECANORA CHLORONA** Nyl.

Orcutt 4793: Salina Cruz, Oax.

**LECANORA COILOCARPA** Nyl.

Orcutt 4720: Tehuantepec, Oax, on bark.

**LECANORA CONIZAEA** Ach.

Orcutt 4722: Tehuantepec, Oax, on bark.

**LECANORA EXPALLENS** Ach.Var: **LUTESCENS** Nyl.

Orcutt 4794: Salina Cruz, Oax; in Hasse herb.

**LECANORA MURALIS** (Schreb) Schaer.

Orcutt 4749: Ajusco, DF.

**LECANORA PALLESCENS** (L) Schaer.

Orcutt 4829: Cardinus, SLP, N 1910.

Orcutt 4779: El Parque, Mor, on trees, I S 1910.

**LECANORA PABELLA** Ach.

Orcutt 4780: Salina Cruz, Oax, in Masse herb.

**LECANORA PUNICEA** Ach.

Orcutt 4768: Salina Cruz, Oax.

**LECANORA SUBFUSCA** (L) Ach.

Orcutt 4725: Tehuantepec, Oax, on bark.

**LECANORA VARIA** (Ehreh) Nyl.

Orcutt 4770: Salina Cruz, Oax.

**LECIDEA ENTEROLEUCA** Fr.Var: **HYPOLEUCA** Th Fr.

Orcutt 4791: Salina Cruz, Oax.

Var: **ACHRISTA** Flk.

Orcutt 4790: Salina Cruz, Oax.

**LECIDEA METLERI** (Kerb) Th Fr.

Orcutt 4840 et 4866: Cardenas, SLP, N 1910.

**LECIDEA PERALEIDA** Th Fr.

Orcutt 4807: Villar, SLP, N 1910.

**LECIDEA.**

Orcutt 4820: Villar, SLP, N 1910.

**LEPIDOCOLLEMA CARACCENSE** Wain

Orcutt 4743: El Parque, Mor (?)

**LEPTOGIUM CORRUGATULUM** Nyl

Orcutt 4741: El Parque, Mer, Ag 1910.

**PANNARIA MOLYBDAEA** (Pers) Tuck.

Orcutt 4752: Telles, Hgo, in Hasse herb.

**PANNARIA PHALIDOTA** (Mont) Nyl.

Orcutt 4750: Ajusco, DF, Ag 1910.

**PANNARIA.**

Orcutt 4858: Near Belleville, Oax, on bark.

**PARMELIA BORRERI** Turn.

Orcutt 4830: Villar, SLP, N 1910.

Orcutt 4785: Salina Cruz, Oax.

**PARMELIA TILIACEA** Ach.

Orcutt 4754: Cardinas, SLP, N 1910.

**PARMELIA CONSPERSA** Ach.

Orcutt 4729: Sanborn, VC, on rock.

Var: **STENOPHYLLA** Ach.

Orcutt 4745: Ajusco, DF, Ag 1910.

**PARMELIA CARACCENSIS** Tayl.

Orcutt 4776: Salina Cruz, Oax, in Hasse herb.

**PARMELIA CYLISPHORA** (Ach). Wain.

Parmella caperata (L) Ach.

Orcutt 4828: Cardenas, SLP, N 1910.

**PARMELIA EXASPERATA** (Ach) Nyl.

Parmelia laeigata (Sm) Nyl Salina Cruz.

Orcutt 4783: Salina Cruz, Oax.

**PARMELIA FULIGINOSA** (Fr) Nyl.Var: **LAETEVIRENS** Flk.

Orcutt 4784: Salina Cruz, Oax.

**PARMELIA LATISSIMA** Fr.

Orcutt 4728: Sanborn, VC, on trees.

**PARMELIA OLIVETOBUM** Nyl.

Orcutt 4744 et 4800: Ajusco, DF, Ag 1910.

**PARMELIA PERLATA** (L) Ach.

Orcutt 4753: El Parque, Mor, Ag 1910, in Hasse herb. (Subsp P: ciliata Nyl, forma

excrecens. Arn.

Orcutt 4759: Ojapa, VC, sterile.

**PARMELIA TILIACEA** (Heff) Ach.

Orcutt 4827: Cardenas, SLP, N 1910.

Orcutt 4782: El Parque, Mor, Ag 1910.

Var: **MEMBRANACEA** Nyl. Teller, Htzo. (Orcutt).

Orcutt 4011: Teztlutlan, Pue, 7 S 1910, in Hasse herb.

Orcutt 3493: Contreras, DF, 9 Ag 1910.

**PELTIGERA CANINA** Hoffm.Var: **SOREDIIATA** Schaer.

Orcutt 4777: Salina Cruz, Oax.

**PERTUSARIA MULTIPUNCTA** Nyl.

Orcutt 4823: Cardenas, SLP, N 1910.

**PERTUSARIA VERRUCOSA** Mont.

Orcutt 4764: Ojapa, VC.

Orcutt 4723: Tehuantepec, Oax, on bark.

**PERTUSARIA WULFENII** DC.

Orcutt 4795: Salina Cruz, Oax.

**PHYSCIA ADGLUTINATA** (Flk) Nyl.

Orcutt 4822: Cardenas, SLP, N 1910, in Hasse herb.

**PHYSCIA AEGILIATA** (Ach) Nyl.

Orcutt 4761: Ojapa, VC.

**PHYSCIA AIPOLIA** (Ach) Nyl.

Orcutt 4815: Cardenas, SLP, N 1910.

**PHYSCIA CRISTA** (Pers.) Nyl.

Orcutt 4719: Tehuantepec, Oax, on bark of shrubs.

In Hasse Herbarium—determined by Dr. H. E. Hasse.

**PHYSCIA LEUCOMELA** (L) Mx.

Orcutt 4775: Salina Cruz, Oax, in Hasse herb.

**PHYSCIA PULVERULENTA** (Hoffm.) Nyl.Var: **MUSCIGENA** Nyl. Salina Cruz, Oax.

Orcutt 4796: Salina Cruz, Oax, in Hasse herb.

**PHYSCIA STELLARIS** L.

Orcutt 4787 et 4877: Salina Cruz, Oax.

**PHYSCIA TRIBACA** (Ach) Tuck.

Orcutt 4845 et 4872: Aguascalientes, Ags, 7 D 1910.

**PHYSCIA.**

Orcutt 4856: Near Belleville, Oax, sterile.

**PLACODIUM AURANTIACUM** N & H.

Orcutt 4718: Tehuantepec, Oax, on bark of shrubs.

**PLACODIUM ORCUTTH** Hasse.

Orcutt 4861: on limestone, Lagunas, Oax. **PYRENULA**.

Orcutt 4859: Tehuantepec, Oax, on bark.

**PHYXINE COCOS** (Ach) Nyl.

Orcutt 4646 et 4832: Alzada, Col, 4 N 1910.

**PHYXINE MEISSNERI** Tuckerman.

Orcutt 4724: Tehuantepec, Oax, on bark.

**PHYXINE PICTA** (Sw) Tuck.

Orcutt 4833: Alzada, Col.

**PHYXINE SOREDIATA** Th Fr.

Orcutt 4803: Colima, Co., N 1910.

Orcutt 4760: Ojapa, VC, sterile.

**RAMALINA CALICARIS** (L) Fr.

Orcutt 4788: Salina Cruz, Oax, in Hasse herb.

**RINODINA BISCHOFFII** (Hepp) Keerb.

Orcutt 4852: Cardenas, SLP, N 1910.

**RINODINA CONFRAGOSA** (Ach) Keerb.

Orcutt 4772: Salina Cruz, Oax.

**RINODINA EXIGUA** Nyl.

Orcutt 4721: Tehuantepec, Oax, on bark, in Hasse herb.

**RINODINA RADIATA** Tuck.

Orcutt 4812: Villar, SLP, N 1910, in Hasse herb.

**RINODINA**.

Orcutt 4847: Aguascalientes, Ags, 7 D 1910.

**STEREOCAULON CORALLOIDES** Fr.

Orcutt 3730: Telles, Hgo, in Hasse herb.

**THELIDIUM**.

Orcutt 4809: Villar, SLP, N 1910, on rocks.

**TELOSCHISTES OCHRYSOPHTHALMUS**

(L) Th Fr.

Orcutt 4818: Villar, SLP, in Hasse herb.

**TELOSCHISTES FLAVICANS** Mull

Arg.

Orcutt 4817: Cordinas, SLP, in Hasse herb.

**TREMOLIUM**.

Orcutt 4835: Cardenas, SLP, N 1910.

**TRYPETHELIUM ELATURIA** Sprengel

Trypethellum Sprengell Ach.

Orcutt 4726: Tehuantepec, Oax, on bark.

**TREMOTYLIIUM SPRUCEI** Mull Arg.

Orcutt 4834: Alzada, Col, 4 N 1910.

**TRYPETHELIUM SPRENGELII** Ach.

Orcutt 4726: Tehuantepec, Oax, on bark.

Orcutt 4763: Ojapa, VC.

**UMBILICARIA PUSTULATA** (L)

Hoffm.

Orcutt 4748 et 4801: El Parque, Mor, 1 S 1910, on lava.

**USNEA FLORIDA** (L) Hoffm.

Orcutt 4773: Ajusco, DF, 20 Ag 1910.

**VERRUCARIA (THELIDIUM) CONO-**

**IDEA** Fr.

Orcutt 4727: Lagunas, Oax, on limestone.

**XANTHORIA LOBATA** Fr.

Orcutt 4742: El Parque, Mor, in Hasse herb.

**XANTHORIA LYCHNAEA** (Ach).

**XANTHORIA LYCHNAEA** (Ach) Th Fr.

Var: **PYGMAEA** Th Fr.

Orcutt 4810: Villar, SLP, N 1910.

Var: **LACINIOSA** Schaer.

Orcutt 4813: Villar, SLP, N 1910, on twigs.

**XANTHORIA PARIETINA** (L.) Th. Fr.

Orcutt 4853: Aguascalientes, Ags, 7 D 1910.

**XANTHORIA POLYCARPA** (Ehrh) Th Fr.

Orcutt 4850: Aguascalientes, Ags, 7 D 1910, on mesquite.

# AMERICAN PLANTS.—MEXICO.

Collected by Charles Russell Orcutt. 1910. Determination by Jesse More Greenman.

**ABUTILON ABUTILOIDES** (Jacq.)

Gärcke

Orcutt 4497: Manzanillo, Col, 20 O 1910.

**ABUTILON TRIQUETRUM** (L) Presl.

Orcutt 4417: Manzanillo, Col, 20 O 1910.

**ACACIA FARNESIANA** Willd.

Orcutt 3191: Chivela, Oax, 16 Ap 1910.

**ACACIA HINDSII** Benth.

Orcutt 3185: Chivela, Oax, 16 Ap 1910.

**ACALYPHA MEXICANA** Muell, Arg.

Orcutt 4341: Xochimilco, DF, 6 O 1910.

**ACALYPHA OREOPALA** Greenm.

Orcutt 4219: Rio Balsas, Gro, 26 Ag 1910.

**ACALYPHA RHOMBIFOLIA** Schlecht.

Orcutt 4180: Rio Balsas, Gro, 26 Ag 1910.

Orcutt 4421: Los Amates, Mor, 25 Ag 1910.

**ACHILLEA MILLEFOLIUM** L.

Orcutt 3716. Ajusco. DF, 19 Ag 1910.

**ACHIMENES GRANDIFLORA** DC.

Orcutt 4212: Rio Balsas, Gro, 26 Ag 1910.

Orcutt 4431: Los Amates, Mor, 25 Ag 1910.

**ACHYRANTHES ASPERA** L.

Orcutt 3173: Sanborn, VC, 31 Mr 1910.

Orcutt 3353. Cordova, VC, 7 Ap 1910.

**AGANIPPEA BELLIDIFLORA** DC.

Orcutt 4277: Churubusco, DF, 4 O 1910.

**AGERATUM CONYZOIDES** L.

Orcutt 3060: Sanborn, VC, 28 F 1910.

**AGERATUM CORYMBOSUM** Zucc.

Orcutt 4324: Churubusco, DF, 4 O 1910.

**ALLIUM GLANDULOSUM** Link & Otto.

Orcutt 3846: El Parque, Mor, 31 Ag 1910.

**ALNUS ARGUTA** Spach.

Orcutt 4051: Teztlutlan, Pue, 8 S 1910.

**ALTERNANTHERA ACHYRANTHA** R

Br.

Orcutt 4145: Telles, Hgo, 21 S 1910.

**AMARANTHUS HYBRIDUS** L.

Orcutt 3919: Pachuca, Hgo, 5 S 1910.

**AMARANTHUS PHIMBLEI** Wat.

Orcutt 4501: Manzanillo, Col, 20 O 1910.

**AMARANTHUS SPINOSUS** L.

Orcutt 3080: Sanborn, VC, 10 Mr 1910.

**AMARANTHUS TRISTIS** L.

Orcutt 4493: Manzanillo, Col, 20 O 1910.

(?)

**AMARANTHUS VIRIDIS** L.

Orcutt 3083: Carmen, FCNT, Oax, 21 Mr 1910.

**AMBROSIA ARTEMISIAEFOLIA** L.

Orcutt 3559: San Angel, DF, 12 Ag 1910.

**ANODA HASTATA** Cav.

Orcutt 3563: San Angel, DF, 12 Ag 1910.

Orcutt 3567: San Angel, DF, 12 Ag 1910.

Orcutt 3577: Olivar, DF, 15 Ag 1910.

Orcutt 4608: Colima, Col, 24 O 1910 (in part).

**ANODA TRIANGULARIS** DC.

Orcutt, 4368: Vidal, Mor, 25 Ag 1910.



- Orcutt 4603: Colima, Col, 24 O 1910 (in part).  
**ANTHERICUM NANUM** Baker.  
 Orcutt 3634: Tlalpam, DF, 16 Ag 1910.  
 Orcutt 4133: Telles, Hgo, 21 S 1910.  
**ANTIGONON LEPTOPUS** Hook & Arn.  
 Orcutt 3325: Tehuantepec, Oax, 19 Ap 1910.  
 Orcutt 4458: Manzanillo, Col, 20 O 1910.  
**APHANOSTEPHUS HUMILIS** Gray.  
 Orcutt 4156: Telles, Hgo, 21 S 1910.  
**ARISTOLOCHIA PARDINA** Dihar.  
 Orcutt 4560: Colima, Col, 24 O 1910.  
**ARTEMISIA MEXICANA** Willd.  
 Orcutt 4255: Xochimilco, DF, 3 O 1910.  
**ARTEMISIA KLOTESCHIANA** Bess.  
 Orcutt 4117: Telles, Hgo, 21 S 1910.  
**ASCLEPIAS CURASSAVICA** L.  
 Orcutt 2873: VC, 16 F 1910.  
 Orcutt 4511: Colima, Col, 24 O 1910.  
**ASCLEPIAS LINARIA** Cav.  
 Orcutt 3673: Olivar, DF, 17 Ag 1910.  
**ASCLEPIAS LONGICORNU** Benth.  
 Orcutt 3107: Coatzacoalcas, VC, 5 Ap 1910.  
**ASTER EXILIS** Ell.  
 Orcutt 3013: Sanborn, VC, 12 Mr 1910.  
 Orcutt 3552: San Angel, DF, 12 Ag 1910.  
 Orcutt 4562: Colima, Col, 24 O 1910.  
 Orcutt 4577: Colima, Col, 24 O 1910.  
**BACCHARIS CONFERTA** HBK.  
 Orcutt 2803: Jalapa, VC, 10 F 1910.  
**BACCHARIS GLUTINOSA** Pers.  
 Orcutt 4075: Mexico, DF, 16 S 1910.  
**BACCHARIS RHESCIODES** HBK.  
 Orcutt 3115: Tezonapa, VC, 5 Ap 1910.  
 Orcutt 3153: Cordova, VC, 6 Ap 1910.  
**BACOPA MONNIERA** (L.) Wettst.  
 Orcutt 3422: Sanborn, VC, 10 Mr 1910.  
**BACOPA PROCUMBENS** (Mill.) Greenm.  
 Orcutt 3001: Sanborn, VC, 11 Mr 1910.  
 Orcutt 4090: El Parque, Mor, 3 S 1910.  
**BACOPA SALEZMANII** (Benth.) Edwall.  
 Orcutt 3284: Chinameca, VC, 30 Ap 1910.  
**BAHIA XYLOPODA** Greenm.  
 Orcutt 3920: Pachuca, Hgo, 5 S 1910.  
**BEGONIA GRACILIS** HBK.  
 Variety **MARTIANA** (L & O) DC.  
 Orcutt 4262: Xochimilco, DF, 3 O 1910.  
 Orcutt 3829: El Parque, Mor, 31 Ag 1910.  
 Variety **NERVIFLOSA** DC.  
 Orcutt 3867: Alarcon, Mor, 31 Ag 1910.  
**BEGONIA HERACLEIFOLIA** C & S.  
 Orcutt 3076: Sanborn, VC, 28 F 1910.  
**BEGONIA UNIFLORA** Rose.  
 Orcutt 4172: Rio Balsas, Gro, 26 Ag 1910.  
**BELLIS MEXICANA** Gray.  
 Orcutt 3768: Cima, Mex, 24 Ag 1910.  
**BETA VULGARIS** L.  
 Orcutt 4071: Churubusco, DF, 4 O 1910.  
**BIDENS GRANDIFLORA** Balb.  
 Orcutt 4271: Churubusco, DF, 4 O 1910.  
**BIDENS HETEROPHYLLA** Ort.  
 Orcutt 4076: Mexico, DF, 16 S 1910.  
 Orcutt 4125: Telles, Hgo, 21 S 1910.  
**BIDENS LEUCANTHA** Willd.  
 Orcutt 3656: Olivar, DF, 17 Ag 1910.  
 Orcutt 4335: Sfe, Mor, 25 Ag 1910.  
**BIDENS OSTRUTHIOIDES** Schz. Bip.  
 Orcutt 3517: Contreras, Valley of Mexico, 9 Ag 1910.  
**BIDENS TETRAULIS** DC.  
 Orcutt 4024 Teztlutlan, Pue, 7 S 1910.  
 Orcutt 3031: Sanborn, VC, 8 Mr 1910.  
**BIGELOVIA VENETA** Gray.  
 Orcutt 4115: Telles, Hgo, 21 S 1910.  
**ELECHUM BROWNEI** Juss.  
 Orcutt 2876: VC, 16 F 1910.  
**BOCCONIA ARBOREA** Watson.  
 Orcutt 4392: El Parque, Mor, 1 S 1910.  
**BOEHMERIA CAUDATA** Sw.  
 Orcutt 3132: Cordova, VC, 6 Ap 1910.  
**BOLDIA OVATIFOLIA** Lag.  
 Orcutt 4621: Colima, Col, 24 O 1910.  
**BOMAREA ACUTIFOLIA** Herb.  
 Orcutt 4022: Teztlutlan, Pue, 7 S 1910.  
**BOUSSINGAULTIA BASELLOIDES** HBK.  
 Orcutt 4598: Colima, Col, 24 O 1910.  
**BRICKELLIA COULTERI** Gray.  
 Orcutt 4496: Manzanillo, Col, 20 O 1910.  
**BRICKELLIA DIFFUSA** Gray.  
 Orcutt 3066: Sanborn, VC, 28 F 1910.  
 Orcutt 4552: Colima, Col, 24 O 1910.  
**BRICKELLIA MARTWEGII** DC.  
 Orcutt 3227: Rincon Antonio, Oax, 21 Ap 1910.  
**BRICKELLIA VERONICAIFOLIA** Gray.  
 Orcutt 3899: Pachuca, Hgo, 5 S 1910.  
**BROMELIARTIA INCONSTANS** Watson.  
 Orcutt 4668: Alzada, Col, 4 N 1910.  
**BUDDLEIA AMERICANA** L.  
 Orcutt 3468: Rincon Antonio, Oax, 21 Ap 1910.  
 Orcutt 3081: Sanborn, VC, 28 F 1910.  
**BUDDLEIA LANCEOLATA** Benth.  
 Orcutt 4094: El Parque, Mor, 3 S 1910.  
**BUDDLEIA MICROPHYLLA** HBK.  
 Orcutt 3783: Cima, Mex, 24 Ag 1910.  
**BUDDLEIA VERTICILLATA** HBK.  
 Orcutt 4338: Xochimilco, DF, 6 O 1910.  
**BUNCHOSIA BIOCCELLATA** Schlecht.  
 Orcutt 3882: Cuernavaca, Mor, 31 Ag 1910.  
**BUNCHOSIA**  
 Orcutt 4207: Rio Balsas, Gro, 26 Ag 1910.  
**CALEA AXILLARIS** DC.  
 Orcutt 2815: Jalapa, VC, 10 F 1910, 2900: VC, 16 F 1910, 3276: Chivela, Oax, 16 Ap 1910.  
**CALEA INTEGRIFOLIA** Hemsl.  
 Orcutt 3151: Cordova, VC, 6 Ap 1910.  
**CACALIA SILPHIFOLIA** Rob. & Greenm.  
 Orcutt 3746: Tres Marias, Mex, 23 Ag 1910.  
**CAESALPINIA PULCHERRIMA** (L.) Sw.  
 Orcutt 4192: Rio Balsas, Gro, 26 Ag 1910.  
**CALCEOLARIA Mexicana** Benth.  
 Orcutt 4041: Teztlutlan, Pue, 7 S 1910.  
**CALLIANDREA GRANDIFLORA** Benth.  
 Orcutt 4381: El Parque, Mor, 3 S 1910.  
**CANAVALLIA OSTUSIFOLIA** DC.  
 Orcutt 4456: Manzanillo, Col, 20 O 1910.  
**CANAVALLIA VILLOSA** Benth.  
 Orcutt 3114: Tezonapa, VC, 5 Ap 1910.  
**CARICA PAPAYA** L.  
 Orcutt 2982: Sanborn, VC, 10 Mr 1910.  
**CARMINATIA TENUIFLORA** DC.  
 Orcutt 4655: Alzada, Col, 4 N 1910.  
**CASSIA OCCIDENTALIS** L.  
 Orcutt 2871: VC, 16 F 1910.  
 Orcutt 4416: Los Amates, Mor, 25 Ag 1910.  
**CASSIA SERICEA** Swartz.  
 Orcutt 4414: Treinte, Mor, 25 Ag 1910.  
**CASSIA TORA** L.

- Orcutt 4606: Colima, Col, 24 O 1910.  
**CASTILLEJA ARVENIS** Cham. & Schlecht.  
 Orcutt 4340: Xochimilco, DF, 6 O 1910.  
 Orcutt 4596: Colima, Col, 24 O 1910.  
**CASTILLEJA COMMUNIS** Benth.  
 Orcutt 3154: Cordova, VC, 6 Ap 1910.  
**CASTILLEJA SCORZONERAEPOLIA**  
 Orcutt 3651: Olivar, DF, 17 Ag 1910.  
**CASTILLEJA TENUIFLORA** Benth.  
 Orcutt 4096: El Parque, Mor, 3 S 1910.  
 Orcutt 4391: El Parque, Mor, 1 S 1910.  
**CELOSIA MOQUINI** Guillem.  
 Orcutt 4688: Alzada, Col, 4 N 1910.  
**CELOSIA ORCUTII** Greenm.  
 Orcutt 4587: Colima, Col, 24 O 1910.  
**CERATOPHYLLUM DEMERSUM** L.  
 Orcutt 4285: Churubusco, DF, 4 O 1910.  
**CESTRUM DUMETORUM** Schlecht.  
 Orcutt 2826: Jalapa, VC, 10 F 1910.  
 Orcutt 2902: Vera Cruz, VC, 16 F 1910.  
**CHAMISSOA ALTISSIMA** HBK.  
 Orcutt 4595: Colima, Col, 24 O 1910.  
**CHAPTALIA NUTANS** Hemsl.  
 Orcutt 3429: Sanborn, VC, 15 Ap 1910.  
**CHAPTALIA SEEMANNII** Hemsl.  
 Orcutt 3810: Parres, Mex, 30 Ag 1910.  
**CHENOPODIUM ALBUM** L.  
 Orcutt 4074: Mexico, DF, 16 S 1910.  
**CHENOPODIUM AMBROSIOIDES** L.  
 Orcutt 4352: Xochimilco, DF, 6 O 1910.  
 Orcutt 4038: Teztlutlan, Pue, 7 S 1910.  
**CHENOPODIUM FOETIDUM** Schrad.  
 Orcutt 4151: Telles, Hgo, 21 S 1910.  
**CISSAMPELOS PAREIRA** L.  
 Orcutt 311: Tezonapa, VC, 5 Ap 1910.  
 Orcutt 4561: Colima, Col, 4 N 1910.  
**CITHAREXYLUM CINEREUM** L.  
 Orcutt 2904: Vera Cruz, VC, 16 F 1910.  
**CLEODENDRON FRAGRANS** L.  
 Orcutt 3149: Cordova, VC, 6 Ap 1910.  
**COCCOLOBA HUMBOLDTII** Meisn.  
 Orcutt 3162: Coatzacoalcos, VC, 21 Mr 1910.  
**COLUMNEA SCHIEDEANA** Schlecht.  
 Orcutt 3128: Tezonapa, VC, 5 Ap 1910.  
**COMMELINA PALLIDA** Willd.  
 Orcutt 4292: Churubusco, DF, 4 O 1910.  
**CONOBEA PUSILLA** Benth. & Hook. f.  
 Orcutt 4184: Rio Balsas, Gro, 26 Ag 1910.  
**CONVOLVULUS INCANUS** Vahl.  
 Orcutt 3611: Olivar, DF, 15 Ag 1910.  
**CORDIA BREVISPLICATA** Mart. & Gal.  
 Orcutt 3186: Chivela, Oax, 16 Ap 1910.  
**CORDIA ELAEGNOIDES** DC.  
 Orcutt 4175: Rio Balsas, Gro, 26 Ag 1910. (?)  
**CORDIA FERRUGINEA** R. & S.  
 Orcutt 4503: Campos, Col, 20 O 1910.  
**CORDIA GERASCANTHUS** Jacq.  
 Orcutt 3053: Sanborn, VC, 8 Mr 1910.  
**CORNUS TOLUCENSIS** HBK.  
 Orcutt 3558: San Agn, DF, 12 Ag 1910.  
**CONYZA CORONOPHOLIA** HBK.  
 Orcutt 3704: Ajusco, DF, 19 Ag 1910.  
**CONYZA LYRATA** HBK.  
 Orcutt 3187: Chivela, Oax, 16 Ap 1910.  
**COSMOS SCABIOSOIDES** HBK.  
 Orcutt 4378: El Parque, Mor, 3 S 1910.  
**COSMOS SULPHEREUS** Cav.  
 Orcutt 4691: Tuxpan canyon, Col, 3 N 1910.  
**CRESCENTIA ALATA** HBK.  
 Orcutt 3474: Salina Cruz, Oax, 27 Ap 1910.  
**CROTON CILIATOGLANDULOSUS**

- Ortega.  
 Orcutt 3877: Cuernavaca, Mor, 31 Ag 1910.  
**CROTON GLANDULOSUS** L.  
 Orcutt 3091: Coatzacoalcos, VC, 21 Mr 1910.  
**CROTON GOSSYPIFOLIUS** Vahl.  
 Orcutt 3965: Teztlutlan, Pue, 6 S 1910.  
**CROTON LOBATUS** L.  
 Orcutt 4174: Rio Balsas, Gro, 26 Ag 1910.  
**CROTON PANAMENSIS** Muell. Arg.  
 Orcutt 2825: Jalapa, VC, 10 F 1910.  
**CROTON PUNCTATUS** Jacq.  
 Orcutt 2888: VC, 16 F 1910.  
**CRUSEA COCINEA** DC.  
 Orcutt 4081: El Parque, Mor, 3 S 1910.  
**CUCUMIS ANGURIA** L.  
 Orcutt 4451: Tecoman, Jal, 20 O 1910.  
**CUSCUTA GRACILLIMA** Engelm.  
 Orcutt 4457: Manzanillo, Col, 20 O 1910.  
**CYCLANTHERA NAUDINIANA** Cogn.  
 Orcutt 4525: Colima, Col, 24 O 1910.  
**CYCLANTHERA PRINGLEI** Rob. & Sea.  
 Orcutt 3864:  
 Orcutt 4241: Xochimilco, DF, 3 O 1910.  
 Orcutt 4380: El Parque, Mor, 3 S 1910.  
**DAHLIA OCCINEA** Cav.  
 Orcutt 3498: Contreras, DF, 9 Ag 1910.  
 Orcutt 3778: Cima, Mex, 24 Ag 1910.  
**DALEA ALOPECUROIDES** Willd.  
 Orcutt 4237: Xochimilco, DF, 3 O 1910.  
**DALEA CITRIODORA** Willd.  
 Orcutt 4127: Telles, Hgo, 21 S 1910.  
 Orcutt 4287: Churubusco, DF, 4 O 1910.  
**DALEA INCONSPICUA** Schauer.  
 Orcutt 4310: Churubusco, DF, 4 O 1910.  
**DALEA LEUCOSTOMA** Schlecht.  
 Orcutt 4265: Xochimilco, DF, 3 O 1910.  
**DALEA MUTABILIS** Willd.  
 Orcutt 3941: Acajeta, Pue, 6 S 1910.  
**DALEA TRIPHYLLA** Pav.  
**DALEA TUBERCULATA** Lag.  
 Orcutt 4354: Xochimilco, DF, 6 O 1910.  
**DATURA TATULA** L.  
 Orcutt 4384: Rio Balsas, Gro, 26 Ag 1910.  
 4423: Los Amates, Mor, 25 Ag 1910.  
 4434: Vista, Mor, 25 Ag 1910. (?)  
**DICLIPTERA ASSURGENS** Juss.  
 Orcutt 3165: VC, 28 Mr 1910.  
**DICLIPTERA RESUPINATA** Juss.  
 Orcutt 4527: Colima, Col, 24 O 1910.  
**DICHONDRA ARGENTEA** Humb. & Bonpl.  
 Orcutt 4129: Telles, Hgo, 21 S 1910.  
**DIOSCOREA CONVULVULACEA** C. & S.  
 Orcutt 4396: El Parque, Mor, 1 S 1910.  
**DIOSCOREA MACROSTACHYA** Bth.  
 Orcutt 3126: Tezonapa, VC, 5 Ap 1910.  
**DIOSCOREA REMOTIFLORA** Kunth.  
 Var: **MACULATA** Uline.  
 Orcutt 4173: Rio Balsas, Gro, 26 Ag 1910.  
**DIOSCOREA ULINEI** Greenm.  
 Orcutt 4395 (in part): El Parque, Mor, 1 S 1910.  
**DIOSCOREA URCEOLATA** Uline.  
 Orcutt 4395 (in part): El Parque, Mor, 1 S 1910.  
**DISTREPTUS SPICATUS** (Juss.) Cass.  
 Orcutt 4570: Colima, Col, 24 O 1910.  
 Orcutt 4680: Alzada, Col, 4 N 1910.  
**DYSODIA CHRYSANTHEMOIDES** Lag.  
 Orcutt 3585: Olivar, DF, 15 Ag 1910.  
**DYSODIA POROPHYLLA** Cav.  
 Orcutt 4684: Alzada, Col, 4 N 1910.



Var: **DISCOIDEA** DC.  
 Oreutt 4553: Colima, Col. 24 O 1910.  
**DORSTENIA DRAKENA** L.  
 Oreutt 4189: Rio Balsas, Gro, 26 Ag 1910.  
**ECHEANDIA MACROCARPA** Greenm.  
 Oreutt 3741: Tres Marias, Mex, 23 Ag 1910.  
 Oreutt 3533: Contreras, DF, 9 Ag 1910.  
**ECLIPTA ALBA** (L.) Haussk.  
 Oreutt 3010: Sanborn, VC, 10 Mr 1910.  
**EGLETES FRINGLEI** Greenm.  
 Oreutt 2983: Sanborn, VC, 10 Mr 1910.  
**EICHORNIA CRASSIPES** Kunth.  
 Oreutt 3461: Coatzacoalcos, VC, 21 Mr 1910.  
**ELVIRA BIFLORA** Cass.  
 Oreutt 3037: Sanborn, VC, 4 Mr 1916.  
**ELEPHANTOPUS SPICATUS** Juss.  
 Oreutt 2896: VC, 16 F 1910.  
**ELYTHRIA TRIDENTATA** Vahl.  
 Oreutt 4466: Manzanillo, Col, 20 O 1910.  
 Oreutt 4602: Colima, Col, 24 O 1910.  
 Oreutt 2996: Sanborn, VC, 12 Mr 1910.  
**EMILIA SONCHIFOLIA** (L.) DC.  
 Oreutt 3036: Carmen, on FCNT, VC, 21 Mr 1910.  
**ENCELIA FRINGLEI** Fernald.  
 Oreutt 3912: Pachuca, Hgo, 5 S 1910.  
**EQUISETUM ROBUSTUM** A. Br.  
 Oreutt 4273: Churubusco, DF, 4 O 1910.  
**EPALTES MEXICANA** Less.  
 Oreutt 3087: Coatzacoalcos, VC, 21 Mr 1910.  
**ERECTITES HIERACIFOLIA** (L.) Raf.  
 Oreutt 3016: Sanborn, VC, 12 Mr 1910.  
**ERIGERON CANADENSIS** L.  
 Oreutt 3557: San Angel, DF, 12 Ag 1910.  
 Oreutt 3020: Sanborn, VC, 10 Mr 1910.  
**ERIGERON MUCRONATUS** DC.  
 Oreutt 3145: Cordova, VC, 6 Ap 1910.  
**ERIGERON REPENS** Gray.  
 Var. **PSAMMOPHILUS** Greenm.  
 Oreutt 2881: sand dunes, VC, 16 F 1910.  
**ERITRICHUM HISPIDUM** Buckley.  
 Oreutt 4128: Teztlutlan, Pue, 7 S 1910.  
**ERYTHRINA BREVIFLORA** DC.  
 Oreutt 3866: Alarcon, Mor, 31 Ag 1910.  
**ESCOBEDIA LAEVIS** Cham. & Schlecht.  
 Oreutt 4678: Alzada, Col, 4 N 1910.  
**ESCOBEDIA LINEARIS** Schlecht.  
 Oreutt 4678: Alzada, Col, 4 N 1910.  
**EUPATORIUM CONYZOIDES** Vahl.  
 Oreutt 3065: Sanborn, VC, 28 F 1910.  
 Oreutt 2903: VC, 16 F 1910.  
**EUPATORIUM DALEOIDES** DC.  
 Oreutt 3343: Cordova, VC, 6 Ap 1910.  
**EUPATORIUM ERYTHROPAFFUM** Rob.  
 Oreutt 3962: Teztlutlan, Pue, 6 S 1910 (?)  
 Oreutt 4007: Teztlutlan, Pue, 7 S 1910.  
**EUPATORIUM MACROPHYLLUM** L.  
 Oreutt 3058: Sanborn, VC, 5 Mr 1910.  
**EUPATORIUM POPULIFOLIUM** HBK.  
 Oreutt 3181: VC, 29 Mr 1910.  
**EUPATORIUM QUADRANGULARE** DC.  
 Oreutt 4574: Colima, Col, 24 O 1910.  
**EUPATORIUM SCORODONIODES** Gray.  
 Var: **GROSSEDENTATUM** Rob.  
 Oreutt 4138: Telles, Hgo, 21 S 1910.  
**EUSTOMA EKALTATUM** (L.) Griseb.  
 Oreutt 3023: Sanborn, VC, 10 Mr 1910.  
**EVOLVULUS ALSINOIDES** L.  
 Oreutt 4309: Churubusco, DF, 4 O 1910.  
 Oreutt 4540: Colima, Col, 24 O 1910.

Oreutt 3916: Pachuca, Hgo, 5 S 1910.  
**EVOLVULUS FILOSISSIMUS** Mart. & Gal.  
 Oreutt 3093: Coatzacoalcos, VC, 21 Mr 1910.  
 Oreutt 4539: Colima, Col, 24 O 1910.  
**EYSENHARDTIA AMORPHOIDES** HBK.  
 Oreutt 3649: Tlalpam, DF, 16 Ag 1910.  
**FLORESTINA LIEBMANNII** Schz. Bip.  
 Oreutt 3183: VC, 28 Mr 1910.  
**FLORESTINA PEDATA** Cass.  
 Oreutt 3575: Olivar, DF, 15 Ag 1910.  
 Oreutt 4370: Santa Fe, Mor, 25 Ag 1910.  
 Oreutt 4251: Xochimilco, DF, 3 O 1910.  
 Oreutt 4205: Rio Balsas, Gro, 26 Ag 1910.  
**FLAVERIA TRINERVIA** (Spreng.) Mohr.  
 Oreutt 4100: Mexico City, DF, 20 S 1910.  
 Oreutt 2872: VC, 16 F 1910.  
**GALINSOGA PARVIFLORA** Cav. var. hispida DC.  
 Oreutt 4349: Xochimilco, DF, 6 O 1910.  
 Oreutt 3339: Cordova, VC, 6 Ap 1910.  
 Oreutt 4109: Mexico, DF, 20 S 1910.  
 Oreutt 3914: Pachuca, Hgo, 5 S 1910.  
 Oreutt 3553: San Angel, DF, 12 Ag 1910.  
 Oreutt 3928: Pachuca, Hgo, 5 S 1910.  
 Oreutt 4052: Teztlutlan, Pue, 7 S 1910.  
**GALIUM MEXICANUM** HBK.  
 Oreutt 4357: Xochimilco, DF, 6 O 1910.  
**GALIUM ORIZABENSE** Hems.  
 Oreutt 4058: Teztlutlan, Pue, 8 S 1910.  
**GALIUM ORIZABENSE** Hems.  
 Oreutt 3963: Teztlutlan, Pue, 6 S 1910.  
**GALPHIMIA GLAUCA** Cav.  
 Oreutt 4183: Rio Balsas, Gro, 26 Ag 1910.  
**GNAPHALIUM ATTENUATUM** DC.  
 Oreutt 3433: Cordova, VC, 7 Ap 1910.  
**GNAPHALIUM PURPUREUM** L.  
 Oreutt 3354: Cordova, VC, 7 Ap 1910.  
 Oreutt, 3625: Tlalpam, DF, 16 Ag 1910.  
 Oreutt 3706: Ajusco, DF, 19 Ag 1910.  
**GNAPHALIUM SPRENGELI** Hook & Arn.  
 Oreutt 3705: Ajusco, DF, 19 Ag 1910.  
**GOMPHRENA DECUMBENS** Jacq.  
 Oreutt 3090: Coatzacoalcos, VC, 21 Mr 1910.  
 Oreutt 3645: Tlalpam, DF, 16 Ag 1910.  
 Oreutt 3689: SAngel, DF, 18 Ag 1910.  
 Oreutt 3886: Cuernavaca, Mor, 31 Ag 1910.  
 Oreutt 4484: Manzanillo, Col, 20 O 1910.  
**GONOBEEA FUSILLA** Benth. & Hook. f.  
 Oreutt 4184: Rio Balsas, Gro, 26 Ag 1910.  
**GUILLEMINEA DENSEA** (Humb & Bonpl) Moq.  
 Oreutt 3945: La Venta, Pue, 6 S 1910.  
 Oreutt 4144: Telles, Hgo, 21 S 1910.  
**GYMNOSPERMA MULTIFLORUM** DC.  
 Oreutt 4360: Xochimilco, DF, 6 O 1910.  
**HABENARIA CRASSICORNIS** Lindl.  
 Oreutt 4405: El Parque, Mor, 1 S 1910.  
**HAMELIA VERSICOLOR** Gray.  
 Oreutt 4424: Los Amates, Mor, 25 Ag 1910. (?)  
 Oreutt 3092: Coatzacoalcos, VC, 21 Mr 1910. (?)  
**HAMISSOA MACROCARPA** HBK.  
 Oreutt 3005: Sanborn, VC, 8 Mr 1910.  
**HELIOTROPIMUM CUBASSAVICUM** L.  
 Oreutt 3475: Salina Cruz, Oax. 27 Ap 1910.

**HELIOTROPIMUM INDIUM** L.  
Orcutt 3089: Coatzacoalcos, VC, 21 Mr 1910.  
Orcutt 4433: Puente de Ixtla, Mor. 25 Ag 1910.  
Orcutt 4417:  
**HELIOTROPIMUM PARVIFLORUM** L.  
Orcutt 4470: Manzanillo, Col. 20 O 1910.  
**HELIOTROPIMUM PHYLLOSTACHYUM** DC.  
Orcutt 4453: Tecoman, Jal. 20 O 1910.  
**HELIOTROPIMUM INUNDATUM** Sw.  
Orcutt 2981: Sanborn, VC, 10 Mr 1910.  
**HETEROSPERMUM PINNATUM** Cav.  
Orcutt 4313: Churubusco, Mex. 4 O 1910.  
Orcutt 3680: Olivar, DF, 17 Ag 1910.  
Orcutt 4155: Telles, Hgo. 21 S 1910.  
**HETEROTHECA INULOIDES** Cass.  
Orcutt 3653: Olivar, DF, 17 Ag 1910.  
**HETEROTOMA TENELLA** Turcz.  
Orcutt 4646: Alzada, Col. 4 N 1910.  
**HIDALGOA TERNATA** Llav. & Lax.  
Orcutt 3022: Sanborn, VC, 10 Mr 1910.  
**HIERACIUM ABSCESSUM** Less.  
Orcutt 3753: Tres Marias, Mex. 23 Ag 1910.  
Orcutt 3501: Contreras, DF, 9 Ag 1910.  
**HYMENATHERUM NEAEI** DC.  
Orcutt 4126: Telles, Hgo. 21 S 1910.  
"Limoncilla".  
**KYPOXIS DECUMBENS** L.  
Orcutt 4048: Teztlutlan, Pue. 7 S 1910.  
**KYPTIS CAPITATA** Jacq.  
Orcutt 2877: VC, 16 F 1910.  
Orcutt 4566: Collima, Col. 24 O 1910.  
**KYPTIS MUTABILIS** (Rich.) Briq.  
Var. **POLYSTACHYA** (HBK.) Briq.  
Orcutt 3088: Coatzacoalcos, VC, 21 Mr 1910.  
**KYPTIS SPICIGERA** Lam.  
Orcutt 4675: Alzada, Col. 4 N 1910.  
**KYPTIS SUAVEOLENS** Poit.  
Orcutt 3084: Carmen, on FCNT, 21 Mr 1910.  
Orcutt 4475 et 4485: Manzanillo, Col. 20 O 1910.  
Orcutt 4515: Collima, Col. 24 O 1910.  
**KYPTIS STELLULATA** Benth.  
Orcutt 3894: Cuernavaca, Mor. 31 Ag 1910.  
Orcutt 4683: Alzada, Col. 4 N 1910.  
**IPOMOEA CARDIOPHYLLA** Gray.  
Orcutt 4491:  
**IPOMOEA DISSECTA** (Jacq.) Pursh.  
Orcutt 3327: Tehuantepec, Oax. 19 Ap 1910.  
**IPOMOEA MURICATA** Cav.  
Orcutt 3610: Olivar, DF, 15 Ag 1910.  
Orcutt 3667: Olivar, DF, 17 Ag 1910.  
**IPOMOEA PEDATISSECTA** Mart. & Gal.  
Orcutt 4167: Rio Balsas, Gro. 26 Ag 1910.  
**IPOMOEA PEDUNCULARIS** Bertol.  
Orcutt 3034: Sanborn, VC, 7 Mr 1910. (?)  
**IPOMOEA PES-CAPRAE** Sweet.  
Orcutt 3463: Coatzacoalcos, VC, 20 Ap 1910.  
**IPOMOEA PURGA** Hayne.  
Orcutt 4003: Teztlutlan, Pue. 7 S 1910.  
**IPOMOEA QUINQUEFOLIA** L.  
Orcutt 3326: Tehuantepec, Oax. 19 Ap 1910.  
**IPOMOEA STOLONIFERA** (Cyrill) Poir.  
Orcutt 3094: Coatzacoalcos, VC, 21 Mr 1910.  
Orcutt 3403: VC, 28 Mr 1910.

**IPOMOEA VULSA** House.  
Orcutt 3157: VC, 28 Mr 1910.  
**INDIGOFERA ANIL** L.  
Orcutt 3052: Sanborn, VC, 9 Mr 1910.  
**ILYSANTHES GRATIOLIOIDES** Benth.  
Orcutt 2998: Sanborn, VC, 11 Mr 1910.  
**IRECINE PANICULATA** (L.) Ktze.  
Orcutt 2989: Sanborn, VC, 28 F 1910.  
**IONIDIUM RIPARIUM** HBK.  
Orcutt 4224 et 4388: Rio Balsas, Gro. 26 Ag 1910.  
**IRECINE CANESCENS** Humb & Bonpl.  
Orcutt 4289: Churubusco, DF, 4 O 1910.  
**IRECINE PANICULATA** (L.) OK.  
Orcutt 3556: Sangel, DF, 12 Ag 1910.  
Orcutt 4295: Churubusco, DF, 4 O 1910.  
**ISOTOMA LONGIFLORA** Presl.  
Orcutt 4549: Collima, Col. 24 O 1910.  
**JAGADERIA DISCOIDEA** Klatt.  
Orcutt 4351: Xochimilco, DF, 6 O 1910.  
Orcutt 4333: Xochimilco, DF, 6 O 1910.  
**JAEGERIA NIETA** Less.  
Orcutt 4579: Collima, Col. 24 O 1910.  
Orcutt 4350: Xochimilco, DF, 6 O 1910.  
**JACQUEMONTIA TAMNIFOLIA** (L.) Griseb.  
Orcutt 4528: Collima, Col. 24 O 1910.  
Orcutt 4659: Alzada, Col. 4 N 1910.  
**KALLSTROEMIA GRANDIFLORA** Torr.  
Orcutt 4169: Rio Balsas, Gro. 26 Ag 1910.  
Orcutt 4538: Collima, Col. 24 O 1910.  
**KALLSTROEMIA MAXIMA** Torr.  
Orcutt 4170: Rio Balsas, Gro. 26 Ag 1910.  
**LAGASCEA HELIANTHIFOLIA** HBK.  
Orcutt 4660: Alzada, Col. 4 N 1910.  
**LANTANA GLANDULOSISSIMA** Heyek.  
Orcutt 3879: Cuernavaca, Mor. 31 Ag 1910.  
**LANTANA HORRIDA** HBK.  
Orcutt 2862: VC, 16 F 1910.  
**LANTANA STRIGOSA** Greenm.  
Orcutt 3880: Cuernavaca, Mor. 31 Ag 1910.  
**LEPECHINIA PROCUMBENS** Benth.  
Orcutt 4056: Teztlutlan, Pue. 8 S 1910.  
**LEPECHINIA SPICATA** Willd.  
Orcutt 3839: El Parque, Mex. 31 Ag 1910.  
Orcutt 3717: Ajusco, DF, 19 Ag 1910.  
Orcutt 4065: Teztlutlan, Pue. 8 S 1910.  
**LIABUM POLYANTHUM** Klatt.  
Orcutt 3064: Belleville, Oax. 23 F 1910.  
**LIPPIA NODIFLORA** (L.) DC.  
Orcutt 2866: VC, 16 F 1910.  
**LIPPIA REPTANS** HBK.  
Orcutt 2985: Sanborn, VC, 10 Mr 1910.  
**LIPPIA STOECHADIFOLIA** (L.) HBK.  
Orcutt 3404: VC, 13 Ap 1910.  
**LITOSPHERMUM SPATULATUM** Mart. & Gal.  
Orcutt 3502: Contreras, DF, 9 Ag 1910.  
**LOBELIA LAXIFLORA** HBK.  
Orcutt 3046: Jalapa, VC, 11 F 1910.  
**LOBELIA GRUINA** Cav.  
Orcutt 3719: Ajusco, DF, 19 Ag 1910.  
**LOBELIA SPLENDENS** Willd.  
Orcutt 4362: Xochimilco, DF, 6 O 1910.  
**LOESELIA COERULEA** Don.  
Orcutt 3602: Olivar, DF, 15 Ag 1910.  
**LOESELIA MEXICANA** (Lam.) Brand.  
Orcutt 4258: Xochimilco, DF, 3 O 1910.  
**LUPPA CYLINDRICA** (L.) Roem.  
Orcutt 3040: Sanborn, VC, 7 Mr 1910.  
**LUPINUS GOEPHILUS** Rose.  
Orcutt 3799: Cima, Mex. 24 Ag 1910.  
**MALACHRA CAPITATA** L.



Orcutt 4479: Manzanillo, Col, 20 O 1910.  
**MALACRA RADIATA** L.  
 Orcutt 3061: Sanborn, VC, 8 Mr 1910.  
**MALVA ROTUNDIFOLIA** L.  
 Orcutt 3568: San Angel, DF, 12 Ag 1910.  
**MALVAVISCUS ARBOREUS** Cav.  
 Orcutt 2899: VC, 16 F 1910.  
**MALVAVISCUS SEPIUM** Schlecht.  
 Orcutt 2811: Jalapa, VC, 10 F 1910.  
**MARANTA ARUNDINACEA** L.  
 Orcutt 4216: Rio Balsas, Gro, 26 Ag 1910.  
**MARTYNIA DIANDEA** Glox.  
 Orcutt 4435: Santa Fe, Mor, 25 Ag 1910.  
**MEDICAGO DENTICULATA** Willd.  
 Orcutt 3662: Olivar, DF, 17 Ag 1910.  
**MEDICAGO LUPULINA** L.  
 Orcutt 3491: Contreras, DF, 9 Ag 1910.  
**MELAMPODIUM ARVENSE** Rob.  
 Orcutt 3780: Cima, Mex, 24 Ag 1910.  
**MELAMPODIUM DIVARICATUM** (Rich.) DC.  
 Orcutt 3891: Cuernavaca, Mor, 31 Ag 1910.  
**MELAMPODIUM GRACILE** Less.  
 Orcutt 4365: Near Treinta, Mor, 25 Ag 1910.  
 Orcutt 4411: San Vicente, Mor, 25 Ag 1910.  
 Orcutt 4365: Treinta, Mor, 25 Ag 1910.  
**MELAMPODIUM PERPOLIATUM** HBK.  
 Orcutt 3548: San Angel, Valley of Mexico, 12 Ag 1910.  
 Orcutt 3892: Cuernavaca, Mor, 31 Ag 1910.  
**MELAMPODIUM LINEARILOBUM** DC.  
 Orcutt 4168: Rio Balsas, Gro, 26 Ag 1910.  
**MELAMPODIUM SERICEUM** Lag.  
 Orcutt 3605: Olivar, DF, 15 Ag 1910.  
 Var: **EXAPPENDICULATUM** Rob.  
 Orcutt 3887: Cuernavaca, Mor, 31 Ag 1910.  
**MELAMPODIUM NELSONII** Greenm.  
 Orcutt 4516: Colima, Col, 24 O 1910.  
**MELAMPODIUM VILICAULE** Greenm, sp. nov.  
 Orcutt 4386: Rio Balsas, Gro, 26 Ag 1910.  
**MELANTHERA DELTOIDEA** Rich.  
 Orcutt 3050: Sanborn, VC, 8 Mr 1910.  
**MELANTHERA OXYLEPIS** DC.  
 Orcutt 3152: Cordova, VC, 6 Ap 1910.  
**MELIA AZEDARACH** L.  
 Orcutt 3324: Tehuantepec, Oax, 19 Ap 1910.  
**MELILOTUS PARVIFLORA** Desf.  
 Orcutt 3674: Olivar, DF, 17 Ag 1910.  
**MELOCHIA PYRAMIDATA** L.  
 Orcutt 4480: Manzanillo, Col, 20 O 1910.  
**MIKANIA GONOLADA** DC.  
 Orcutt 3426: VC, 13 Ap 1910.  
**MIKANIA SCANDENS** Willd.  
 Orcutt 3346: Cordova, VC, 6 Ap 1910.  
**MILLEBIA QUINQUEFLOA** L.  
 Orcutt 3883: Cuernavaca, Mor, 31 Ag 1910.  
**MIMOSA FUDICA** L.  
 Orcutt 3063: Sanborn, VC, 8 Mr 1910.  
**MOLLUGO VERTICILLATA** L.  
 Orcutt 3019: Sanborn, VC, 10 Mr 1910.  
**MONNINA BALAPENSIS** HBK.  
 Orcutt 3515: Contreras, DF, 9 Ag 1910.  
 Orcutt 4055: Teztlutlan, Pue, 8 S 1910.  
**MONTANOA FRUTESCENS** (Mairet) Hemsl.

Orcutt 4377: El Parque, Mor, 3 S 1910.  
**MONTANOA TOMENTOSA** Llav. & Lex.  
 Orcutt 3896: Pachuca, Hgo, 5 S 1910.  
 4256: Xochimilco, DF, 3 O 1910.  
**MORINGA OLEIFERA** Lam.  
 Orcutt 3456: Rincon Antonio, Oax, 21 Ap 1910.  
**MUNTINGIA CALABURA** L.  
 Orcutt 3072: Sanborn, VC, 28 F 1910.  
**NAMA DICHOTOMUM** Ruiz. & Pav.  
 Var: **ANGUSTIFOLIUM** Gray  
 Orcutt 3936: Acajete, Pue, 6 S 1910.  
 Orcutt 4134: Telles, Hgo, 21 S 1910.  
 Orcutt 4337: Xochimilco, DF, 6 O 1910.  
**OCIMUM MICRANTHEUM** Willd.  
 Orcutt 3085: Carmen, on FCNT, 21 Mr 1910.  
**ONOSMODIUM STRIGOSUM** Don.  
 Orcutt 3520: Contreras, DF, 9 Ag 1910.  
**OXALIS BEELANDIERI** Torr.  
 Orcutt 4467: Manzanillo, Col, 20 O 1910.  
 Orcutt 3142: Cordova, VC, 6 Ap 1910.  
**OXALIS DIVERGENS** Benth.  
 Orcutt 3668: Olivar, DF, 17 Ag 1910.  
**OXALIS STRICTA** L.  
 Orcutt 3025: Sanborn, VC, 12 Mr 1910.  
 Orcutt 3141: Cordova, VC, 6 Ap 1910.  
 Orcutt 3809: Parres, Mex, 30 Ag 1910.  
**OXALIS TETRAPHYLLA** Cav.  
 Orcutt 4091: El Parque, Mor, 3 S 1910.  
**PACHYRHIZUS ANGULATUS** Rich.  
 Orcutt 4182: Rio Balsas, Gro, 2 O Ag 1910.  
 Orcutt 4227: Rio Balsas, Gro, 26 Ag 1910.  
**PARJETARIA DEBILIS** Forst.  
 Orcutt 3620: Tlalpam, DF, 16 Ag 1910.  
**PARTHENIUM HYSTEROPHORUS** L.  
 Orcutt 4506: Colima, Col, 24 O 1910.  
 Orcutt 3562: San Angel, DF, 12 Ag 1910.  
 Orcutt 3082: Sanborn, VC, 28 F 1910.  
 Orcutt 4102: Mexico, DF, 20 S 1910.  
**PECTIS PROSTRATA** Cav.  
 Orcutt 4201: Rio Balsas, Gro, 26 Ag 1910.  
 Orcutt 4312: Churubusco, DF, 4 O 1910.  
 Orcutt 4601: Colima, Col, 24 O 1910.  
 Orcutt 4492: Manzanillo, Col, 20 O 1910.  
**PENTSTEMON BARBATUS** (Cav.) Nutt.  
 Orcutt 3650: Olivar, DF, 17 Ag 1910.  
**PENTSTEMON CAMPANULATUS** Willd.  
 Orcutt 3499: Contreras, DF, 9 Ag 1910.  
 Orcutt 3942: Acajete, Pue, 6 S 1910.  
**PEDICULARIS MEXICANA** Zucc.  
 Orcutt 3745: Tres Marias, Mex, 23 Ag 1910.  
**PETUSARIA VERRUCOSA** Mont.  
 Orcutt 4723: Tehuantepec, Oax, on bark.  
**PEPEROMIA HISPIDULA** A. Dietr.  
 Var: **MINOR** C. DC.  
 Orcutt 3964: Teztlutlan, Pue, 6 S 1910.  
**PETRAEA ARBOREA** HBK.  
 Orcutt 3042: Sanborn, VC, 5 My 1910.  
**PETIVERIA ALLIACEA** L.  
 Orcutt 4530: Colima, Col, 24 O 1910.  
**PFAPFA HOOKERIANA** (Hems) Greenm.  
 Orcutt 2984: Sanborn, VC, 11 Mr 1910.  
**PHACELIA PIMPINELLOIDES** (Spreng.) Gray.  
 Orcutt 3701: Ajusco, DF, 19 Ag 1910.  
**PHAEOSPHERION PERGICARIAE-FOLIUM** (DC) Clarke.  
 Orcutt 2924: Belleville, Oax, 23 F 1910.  
**PLANTAGO HISTERIA** HBK.

Oreutt 3707: Ajusco, DF, 19 Ag 1910.  
**PLANTAGO MEXICANA** Link.  
 Oreutt 3671: Olivar, DF, 17 Ag 1910.  
**PHYSALIS POETENS** Poir.  
 Oreutt 3531: Contreras, DF, 9 Ag 1910.  
**PHYSALIS GRACILIS** Miess.  
 Oreutt 3021: Sanborn, VC, 11 Mr 1910.  
**PHYSALIS PHILADELPHICA** Lam.  
 Oreutt 2867: Vera Cruz, VC, 16 F 1910.  
**PHYSALIS PUBERULA** Fernald.  
 Oreutt 3938: Cuernavaca, Mor, 31 Ag 1910.  
**PHYSALIS SUBINTEGRA** Fernald.  
 Oreutt 3757: Tres Marias, Mex, 23 Ag 1910.  
**PIERIS ECHIOIDES** L.  
 Oreutt 4283: Churubusco, DF, 4 O 1910.  
**PIRAMIA ANTIDESMA** Sw.  
 Oreutt 2857: Jalapa, VC, 11 F 1910.  
**PILEA PUBESCENS** Liebm.  
 Var: **FUSCATA** Wedd.  
 Oreutt 4588: Colima, Col, 24 O 1910.  
**PILEA MICROPHYLLA** Liebm.  
 Oreutt 3352: Cordoba, VC, 7 Ap 1910.  
**PINAROPAPPUS ROSEUS** Less.  
 Oreutt 3609: Olivar, DF, 15 Ag 1910.  
**PIQUERIA PILOSA** HBK.  
 Oreutt 3770: Cima, Mex, 24 Ag 1910.  
**PIQUERIA TRINERVIA** Cav.  
 Oreutt 3665: Olivar, DF, 17 Ag 1910.  
 Oreutt 4116: Telles, Hgo, 21 S 1910.  
 Oreutt 3478: Contreras, DF, 9 Ag 1910.  
**PISTEA STRATIOTES** L.  
 Oreutt 3166: Coatzacoalcos, VC, 21 Mr 1910.  
**PLUCKEA ODORATA** (L.) Cass.  
 Oreutt 3160: VC, 28 Mr 1910.  
**PLUMBAGO SCANDENS** L.  
 Oreutt 4535: Colima, Col, 24 O 1910.  
**POLEMONIUM MEXICANUM** Cerv.  
 Oreutt 4235: Cima, Mex, 24 Ag 1910.  
**POLYGONUM ACRE** HBK.  
 Oreutt 4014: Teziutlan, Pue, 7 S 1910.  
**POLYGALA AMERICANA** Mill.  
 Oreutt 4204: Rio Balsas, Gro, 26 Ag 1910.  
**POLYGALA PANICULATA** L.  
 Oreutt 3029: Sanborn, VC, 10 Mr 1910.  
**POLYGONUM PERSICARIODES** HBK.  
 Oreutt 4559: Colima, Col, 24 O 1910.  
**PONTEDERIA CORDATA** L.  
 Oreutt 2674: VC, 16 F 1910.  
**PRIVA ECHINATA** Juss.  
 Oreutt 2999: Sanborn, VC, 12 Mr 1910.  
**PRIVA HISPIDA** Juss.  
 Oreutt 3628: Tlalpam, DF, 16 Ag 1910.  
**PROELICHTIA INTERRUPTA** (L.) Moq.  
 Oreutt 4557 et 4576: Colima, Col, 24 O 1910.  
**PSIDIUM GUAYAVA** L.  
 Oreutt 3166: Chivela, Oax, 16 Ap 1910.  
**QUAMOCUIT COCCINEA** (L.) Moench.  
 Oreutt 4306: Churubusco, DF, 4 O 1910.  
**RELBUNUM HYPOCAERTIUM** Hemsl.  
 Oreutt 4021: Teziutlan, Pue, 7 S 1910.  
**RESEDA LUTEOLA** L.  
 Oreutt 3597: Olivar, DF, 15 Ag 1910.  
**RICHARDIA SCABRA** L.  
 Oreutt 2893: VC, 16 F 1910.  
**RIVINA HUMILIS** L.  
 Oreutt 4622: Colima, Col, 24 O 1910.  
 Oreutt 3176: Sanborn, VC, 31 Mr 1910.  
**RHYNCHOSIA MENISPERMOIDES** DC.  
 Oreutt 3104: Coatzacoalcos, VC, 21 Mr 1910.  
**RUMEX CRISPUS** L.

Oreutt 3821: El Parque, Mor, 31 Ag 1910.  
**RUMEX MARITIMUS** L.  
 Oreutt 4073: Mexico City, DF, 16 S 1910.  
**RUMEX MEXICANUS** Meisn.  
 Oreutt 3801: Parres, Mex, 30 Ag 1910.  
**RUELLIA PRINGLEY** Fernald.  
 Oreutt 4209: Rio Balsas, Gro, 26 Ag 1910.  
**RUSSELLIA MULTIPLORA** Sims.  
 Oreutt 3139: Cordova, VC, 6 Ap 1910.  
**SABAZIA ANOMALA** Greenm.  
 Oreutt 3812: Parres, Mex, 30 Ag 1910.  
**SABAZIA URTICAEPOLIA** (HBK) DC.  
 Oreutt 3553 a: San Angel, DF, 12 Ag 1910.  
**SABAZIA HUMILIS** Cav.  
 Oreutt 4336: Sanborn, VC, 24 F 1910.  
**SALIX BONPLANDIANA** HBK.  
 Oreutt 4070: Mexico, DF, 16 S 1910.  
**SALIX TAXIFOLIA** HBK.  
 Oreutt 4558: Colima, Col, 24 O 1910.  
**SALVINIA NATANS** (L.) All.  
 Oreutt 3096: Coatzacoalcos, VC, 21 Mr 1910.  
**SALVIA AMARISSIMA** Ort.  
 Oreutt 4274: Churubusco, DF, 4 O 1910.  
 Oreutt 3926: Pachuca, Hgo, 5 S 1910.  
 Oreutt 3479: Contreras, DF, 9 Ag 1910.  
**SALVIA CORDOBIENSIS** Briq.  
 Oreutt 3136: Cordova, VC, 6 Ap 1910.  
**SALVIA ELEGANS** Vahl.  
 Oreutt 3965: Teziutlan, Pue, 6 S 1910.  
**SALVIA ELONGATA** HBK.  
 Oreutt 3751: Tres Marias, Mex, 23 Ag 1910.  
**SALVIA HIRSUTA** Jacq.  
 Oreutt 3573: Olivar, DF, 15 Ag 1910.  
**SALVIA LANCEOLATA** Brouss.  
 Oreutt 3897: Pachuca, Hgo, 5 S 1910.  
**SALVIA MEXICANA** L.  
 Var: **MINOR** Benth.  
 Oreutt 3832: El Parque, Mor, 31 Ag 1910.  
 Oreutt 4321: Churubusco, DF, 4 O 1910.  
**SALVIA ONSCURA** Benth.  
 Oreutt 2901: VC, 16 F 1910.  
**SALVIA POLYSTACHYA** Ort.  
 Var: **PHILIPPENSIS** Fernald.  
 Oreutt 4254: Xochimilco, DF, 3 O 1910.  
**SALVIA PRUNELLOIDES** HBK.  
 Oreutt 3718: Ajusco, DF, 19 Ag 1910.  
**SALVIA SESSEI** Benth.  
 Oreutt 3868: Alarcon, Mor, 31 Ag 1910.  
**SALVIA TILIAEFOLIA** Vahl.  
 Oreutt 4250: Xochimilco, DF, 3 O 1910.  
 Oreutt 4120: Telles, Hgo, 21 S 1910.  
 Oreutt 3873: Cuernavaca, Mor, 31 Ag 1910.  
**SAMBUCUS MEXICANA** Presl.  
 Oreutt 3998: Teziutlan, Pue, 7 S 1910.  
**SANVITALIA PROCUMBENS** Lam.  
 Oreutt 3580: Olivar, DF, 15 Ag 1910.  
**SARACHA JALTONATA** Schlecht.  
 Oreutt 3512: Contreras, DF, 9 Ag 1910.  
**SARACHA UMBELLATA** (Roth) Don.  
 Oreutt 3807: Uarres, Mex, 30 Ag 1910.  
**SENECIO SALIGNUS** DC.  
 Oreutt 4095: El Parque, Mor, 3 S 1910.  
**SENECIO SANGUISORBIAE** DC.  
 Oreutt 3767: Cima, Mex, 24 Ag 1910.  
**SCHKURRIA ABOETANOIDES** Roth.  
 Oreutt 3683: Olivar, DF, 17 Ag 1910.  
**SCHKURRIA HOPKIRKIA** Gray.  
 Oreutt 4625: Alzada, Col, 4 N 1910.  
 Oreutt 3888: Cuernavaca, Mor, 31 Ag



1910.

**SKUHRIA VIRGATA** DC.

Orcutt 4072: Mexico City, DF, 16 S 1910.

Orcutt 3921: Pachuca, Hgo, 5 S 1910.

**SCLEROCARPUS MULTIFIDUS** Greenman, sp. nov.

Orcutt 4177: Río Balsas, Gro, 26 Ag 1910.

**SCLEROCARPUS ORCUTTII** Greenman, sp. nov.

Orcutt 4589: Colima, Col, 24 O 1910.

**SCLEROCARPUS UNISERIALIS**

(Hook.) Benth. &amp; Hook. f.

Var: (?) **EPAPPOSA** Greenm. var. nov.

Orcutt 4208: Río Balsas, Gro, 26 Ag 1910.

**SCOPARIA DULCES** L.

Orcutt 4526: Colima, Col, 24 O 1910.

Orcutt 3012: Sanborn, VC, 12 Mr 1910.

**SCUTELLARIA CAERULEA** Moc. & Sesse.

Orcutt 4375: El Parque, Mor, 3 S 1910.

Orcutt 3500: Contreras, DF, 9 Ag 1910.

**SIBTHORPIA PICHINCHENSIS** HBK.

Orcutt 3774: Clima, Mex, 24 Ag 1910.

Orcutt 3968: Teziutlan, Pue, 6 S 1910.

**SCYOS DEPPEI** Don.

Orcutt 3943: Acajete, Pue, 6 S 1910.

**SISYRINCHIUM ANGUSTIFOLIUM** Mill.

Orcutt 3712: Ajusco, DF, 19 Ag 1910.

**SISYRINCHIUM MICRANTHEUM** Cav.

Orcutt 2844: Jalapa, VC, 11 F 1910.

**SMILAX BONA-NOX** L.

Orcutt 2817: Jalapa, VC, 10 F 1910.

**SMILAX** sp.

Orcutt 3118: Tezonapa, VC, 5 Ap 1910.

**SOLANUM BULBO-CASTANUM** Dunal.

Orcutt 3833: El Parque, Mor, 31 Ag 1910.

**SOLANUM CERVANTESII** Lag.

Orcutt 4136: Telles, Tgo, 21 S 1910.

**SOLANUM DEFLEXUM** Greenm.

Orcutt 4389: Río Balsas, Gro, 26 Ag 1910.

Orcutt 4210: Río Balsas, Gro, 26 Ag 1910.

**SOLANUM DIVERSIFOLIUM** Schlecht.

Orcutt 2897: Vera Cruz, VC, 16 F 1910.

**SOLANUM ELAEGINIFOLIUM** Cav.

Orcutt 3158: VC, 28 Mr 1910.

**SOLANUM FONTANESIANUM** Dunal.

Orcutt 4509: Colima, Col, 24 O 1910.

**SOLANUM GRAYI** Rose.

Orcutt 3365: Omealea, VC, 7 Ap 1910.

**SOLANUM MAMMOSUM** L.

Orcutt 2907: VC, 16 F 1910.

**SOLANUM OCHRACEO-FERRUGIN- EUM** (Dun) Fernald.

Orcutt 3820: El Parque, Mor, 31 Ag 1910.

**SOLANUM SISYMBRIIFOLIUM** Lam.

Orcutt 4187: Río Balsas, Gro, 26 Ag 1910.

**SOLIDAGO PANICULATA** DC.

Orcutt 4364: Xochimilco, DF, 6 O 1910.

Orcutt 4281: Churubusco, DF, 4 O 1910.

**SONCHUS OLERACEUS** L.

Orcutt 4077: Mexico, DF, 16 S 1910.

**SPIGEEA HUMBOLDTIANA** Cham. & Schlecht.

Orcutt 3176: et 3177. Sanborn, VC, Mr 1910.

**SPILANTHES AMERICANA** (Nutt.) Hiern.

Orcutt 3340: Cordova, VC, 6 Ap 1910.

**SPILANTHES OCYMIFOLIA** (Lam.) Moore.

Orcutt 4573: Colima, Col, 24 O 1910.

**SPIRANTHES CINNABARINA** Hems.

Orcutt 4286: Churubusco, DF, 4 O 1910.

**STACHYS AGRARIA** Cham. & Schlecht.

Orcutt 3715: Ajusco, DF, 19 Ag 1910.

**STACHYS COCCINEA** Jacq.

Orcutt 4589: Colima, Col, 24 O 1910.

Orcutt 3506: Contreras, DF, 9 Ag 1910.

Orcutt 3755: Tres Marias, Mex, 23 Ag 1910.

**STACHYS REPENS** Mart. & Gal.

Orcutt 3815: Parres, Mex, 30 Ag 1910.

**STACHYTARPHETA JAMAICENSIS** Vahl.

Orcutt 3179: VC, 28 Mr 1910.

**STEVIA ELATIOE** HBK.

Orcutt 3527: Contreras, Valley of Mexico, 9 Ag 1910.

**STEVIA MICRANTHA** Lag.

Orcutt 4293: Churubusco, DF, 4 O 1910.

**STEVIA NEPETAEPOLIA** HBK.

Orcutt 3659: Olivar, DF, 17 Ag 1910.

**STYVIA PANICULATA** Lag. (?)

Orcutt 4257: Xochimilco, DF, 3 O 1910.

**STEVIA SALICIFOLIA** Cav.

Orcutt 3924: Pachuca, Hgo, 5 S 1910.

Orcutt 4339: Xochimilco, DF, 6 O 1910.

**STEVIA SERRATA** Cav., var. **ARGUTA** Rob.

Orcutt 3676: Olivar, DF, 17 Ag 1910.

**STIGMAPHYLLON LINDENIANUM** A. Juss.

Orcutt 3131: Tezonapa, VC, 5 Ap 1910.

**SUEDA DEPRESSA** (Pursh) Wat.

Orcutt 4103: Mexico, DF, 20 S 1910.

**SYNEDRELLA NODIFLORA** Gaertn.

Orcutt 3129: Tezonapa, VC, 5 Ap 1910.

**TAGETES FILIFOLIA** Lag.

Orcutt 4348: Xochimilco, DF, 6 O 1910.

Orcutt 4361: Xochimilco, DF, 6 O 1910.

Orcutt 4656: Alzada, Col, 4 N 1910.

**TAGETES CORONOPOLIA** Willd.

Orcutt 4359: Xochimilco, DF, 6 O 1910.

**TAGETES MICRANTHA** Cav.

Orcutt 3596: Olivar, DF, 15 Ag 1910.

**TAGETES LUCIDA** Cav.

Orcutt 4630: Alzada, Col, 4 N 1910.

**TAGETES PATULA** L.

Orcutt 4554: Colima, Col, 24 O 1910.

**TAGETES SUBULATA** Llav. & Lex.

Orcutt 4650: Alzada, Col, 4 N 1910.

**TAGETES TENUIFOLIA** Cav.

Orcutt 3901: Pachuca, Hgo, 5 S 1910.

**TARAXACUM OFFICINALE** Weber.

Orcutt 3808: Parres, Mex, 30 Ag 1910.

**TINANTIA FUGAX** Scheldw.

Orcutt 4006: Teziutlan, Pue, 7 S 1910.

Orcutt 4165: Río Balsas, Gro, 26 Ag 1910.

Orcutt 4290: Churubusco, DF, 4 O 1910.

**TECOMA STANS** Juss.

Orcutt 4202: Río Balsas, Gro, 26 Ag 1910.

**TEUCRIUM INFLATUM** Sw.

Orcutt 3146: Cordova, VC, 6 Ap 1910.

**THUNBERGIA ALATA** Bojer.

Orcutt 3135: Cordova, VC, 6 Ap 1910.

**TITHONIA DIVERSIFOLIA** Gray.

Orcutt 3427: VC, 13 Ap 1910 (cultivated).

**TITHONIA TUBAEFORMIS** Cass.

Orcutt 4104: Mexico, DF, 20 S 1910.

**TRADESCANTIA COMMELINOIDES** Roem. & Schult.

Orcutt 4382: El Parque, Mor, 3 S 1910.  
**TRADESCANTIA CRASSIFOLIA** Cav.  
 Orcutt 3579: Olivar, DF, 15 Ag 1910.  
**TRADESCANTIA MACROPHYLLA** Greenm.  
 Orcutt 4186: Rio Balsas, Gro, 26 Ag 1910.  
**TRADESCANTIA PULCHELLA** HBK.  
 Orcutt 3497: Contreras, DF, 9 Ag 1910.  
**TRIBULUS CISTOIDES** L.  
 Orcutt 3394: VC, 28 Mr 1910.  
 Orcutt 4409: near Treinte, Mor, 25 Ag 1910.  
**TRIDAX CORONOPOLIA** (HBK.) Hemsl.  
 Orcutt 3586: Olivar, DF, 15 Ag 1910.  
 Orcutt 3663: Olivar, DF, 17 Ag 1910.  
 Orcutt 3875: Cuernavaca, Mor, 31 Ag 1910.  
 Orcutt 4366: Hermosa, Mor, 25 Ag 1910.  
 Orcutt 4408: near Treinte, Mor, 25 Ag 1910.  
**TRIDAX FLATYPHYLLA** Rob.  
 Orcutt 4181: Rio Balsas, Gro, 26 Ag 1910.  
**TRIDAX PROCUMBENS** L.  
 Orcutt 4600: Colima, Col, 24 O 1910.  
 Orcutt 4711: Tuxpan canyon, Col, 3 N 1910.  
**TRIODON ANGULATUM** Benth.  
 Orcutt 3366: Omealca, VC, 7 Ap 1910.  
**TRIXIS FRUTESCENS** P Browne.  
 Orcutt 2863a: VC, 16 F 1910. Shrub 6 ft. hl.  
**TRIXIS PROCUMBENS** L.  
 Orcutt 3033: Sanborn, VC, 7 Mr 1910.  
**TRIXIS PTEROCAULIS** Rob. & Greenm.  
 Orcutt 4464: Manzanillo, Col, 20 O 1910.  
**TOUENEFORTIA HIRsutissima** L.  
 Orcutt 3116: Tezonapa, VC, 5 Ap 1910.  
**URICA DIOICA** L.  
 Var: **ANGUSTIFOLIA** Wedd.  
 Orcutt 4124: Telles, Hgo, 21 S 1910.  
**URICA CHAMAEDRYOIDES** Pursh.  
 Orcutt 4328: Churubusco, DF, 4 O 1910.  
**URICA SUBINCISA** Benth.  
 Orcutt 4329: Xochimilco, DF, 6 O 1910.  
**URAGOGA TOMENTOSA** (Aubl.) Schum.  
 Orcutt 2927: Belleville, Oax, 23 F 1910.  
**VERBENA CILIATA** Bth.  
 Orcutt 3551: SAngel, DF, 12 Ag 1910.  
 Orcutt 4146 (in part): Telles, Hgo, 21 S 1910 (in part sp indet).  
**VERBENA EHRENBERGIANA** Schauer  
 Orcutt 3750: Tres. Marias, Mor, 23 Ag 1910.  
**VIOLA FLAGELLIFORMIS** Hems.  
 Orcutt 3756: Tres Marias, Mex, 23 Ag 1910.  
**VERBENA POLYSTACHYA** HBK.  
 Orcutt 3950: Huiztilzilpam, Pue, 6 S 1910.  
 Orcutt 3488: Contreras, DF, 9 Ag 1910.  
**VERBENA RHINANTHIFOLIA** Mart & Gal.  
 Orcutt 3598: Olivar, DF, 15 Ag 1910.  
**VERESINA PINNATIFIDA** Cav.  
 Orcutt 3041: Sanborn, VC, 4 Mr 1910.  
**VERESINA TETRAPTERA** Gray.  
 Orcutt 4416: El Parque, Mor, 3 S 1910.  
 Orcutt 4418: El Parque, Mor, 3 S 1910.  
**VERESINA VIRGATA** Cav.  
 Orcutt 4355: Xochimilco, DF, 6 O 1910.  
**VERNONIA ASCHENBOERNIANA** Schauer.

Orcutt 3417: Sanborn, VC, 10 Mr 1910:  
 3430: Hermosa, VC, 25 Mr 1910. 3230:  
 Rincon Antonio, Oax, 21 Ap 1910.  
**VERNONIA SCHIEDEANA** Less.  
 Orcutt 3027: Sanborn, VC, 10 Mr 1910.  
**VERONICA PEREGRINA** L.  
 Orcutt 3140: Cordova, VC, 6 Ap 1910.  
**VIGUIERA HELIANTHOIDES** HBK.  
 Orcutt 4326: Churubusco, DF, 4 O 1910.  
**VIGUIERA TENUIS** Gray.  
 Orcutt 4631: Alzada, Col, 4 N 1910.  
**VIOLA FLAGELLIFORMIS** Hemsl.  
 Orcutt 3756: Tres Marias, Mex, 23 Ag 1910.  
**WALTHERIA AMERICANA** L.  
 Orcutt 4489: Manzanillo, Col, 20 O 1910.  
 Orcutt 3051: Sanborn, VC, 8 Mr 1910.  
**WIGANDIA CARACASANA** HBK.  
 Orcutt 4299: Churubusco, Mex, 4 O 1910.  
**XANTHOCEPHALUM CENTAUROIDES** Willd.  
 Orcutt 4112: Mexico, DF, 20 S 1910.  
**XANTHOCEPHALUM LINEARIFOLIUM** (DC.) Greenm.  
 Orcutt 3784: Clima, Mex, 24 Ag 1910.  
**ZALUZANIA GLOBOSA** Schz. Bip.  
 Orcutt 4139: Telles, Hgo, 21 S 1910.  
**ZALUZANIA TELLOBA** Pers.  
 Orcutt 3902: Pachuca, Hgo, 5 S 1910.  
 4131: Telles, Hgo, 21 S 1910.  
**ZEXMENIA GHIESBREGHTII** Gray.  
 Orcutt 4679: Alzada, Col, 4 N 1910.  
**ZEXMENIA HELIANTHOIDES** (DC.) Gray.  
 Orcutt 4667: Alzada, Col, 4 N 1910.  
**ZINNIA MULTIFLORA** L.  
 Orcutt 3623: Tlalpam, DF, 16 Ag 1910.  
 Orcutt 4200: Rio Balsas, Gro, 26 Ag 1910.  
**ZINNIA PALMERI** Gray.  
 Orcutt 4498: Manzanillo, Col, 20 O 1910.  
**ZINNIA PAUCIFLORA** L.  
 Orcutt 3881: Cuernavaca, Mor, 31 Ag 1910.  
**ZORNIA DIPHYLLA** (L.) Pers.  
 Orcutt 3518: Contreras, DF, 9 Ag 1910.  
 Orcutt 4548: Colima, Col, 24 O 1910.

**MEXICAN FUNGI.**

Collected by Charles Russell Orcutt. 1910.

Determination by William A. Murrill.

**AGARICUS FLABELLATUS** B & C.  
 Orcutt 4644: Alzada, Col, 4 N 1910.  
**AURICULARIA AURICULA** (L.) Underw.  
 Orcutt 4897: Sanborn, VC.  
**AURICULARIA MESSENERICA**  
 Orcutt 4895: Rio Verde, Oax.  
**COLTECIA PERENNIS** Murrill.  
 Orcutt 4730: Clima, Mex.  
**CORIOLOPSIS RIGIDA**  
 Orcutt 4899: Sanborn, VC, Mr 1910.  
**FOMES SAGAEANUS** (Mont) Murrill.  
 Orcutt 4732: Tehuantepec, Oax.  
**GEASTER HYGROMETRICUS** Fr.  
 Orcutt 4731: Tehuantepec, Oax.  
**GLOEOPHYLLUM STRIATUM** (Sw) Murrill.  
 Orcutt 4225: Rio Balsas, Gro, 26 Ag 1910.  
**LENTINUS CRINATUS** (L) Fr.  
 Orcutt 4213 et 4214: Rio Balsas, Gro, 26 Ag 1910.  
**LENTINUS VELUTINUS**  
 Orcutt 4896: Sanborn, VC, Mr 1910.



**LYCOGALA EPIDENDRUM**

Orcutt 4734: Tehuantepec, Oax.

**POGONOMYCES HYDNOIDES**

Orcutt 4898: Sanborn, Vc, Mr 1910.

**PYCNOPORUS SANGUINEUS** (L.) Mur-

Orcutt 4226: Rio Balsas, Gro, 26 Ag 1910.

rill.

Orcutt 2967: Sanborn, VC, Mr 1910.

**PHYROPOLYPORUS YUCATANENSIS**

Murrill.

Orcutt 4733. Tehuantepec, Oax.

**REXAGONA TENUIS** Hk.

Orcutt 4641: Alzada, Col, 4 N 1910.

**SCHIZOPHYLLUM ALNEUM** (Sw)

Schroet.

Orcutt 4227: Rio Balsas, Gro, 26 Ag 1910.

**STEREUM PAPHINUM**

Orcutt 4894: Sanborn, VC, Mr 1910.

**TRAVETES HYDROIDES** Fr.

Orcutt 4642: Alzada, Col, 4 N 1910.

**Abbreviations and Signs.**

See also American Plants 1:372.

Ags=Aguascalientes.

alt-ernate, one after another.

ann-ual, flowering and fruiting in the first year or season and then dying.

anth-anthropology, anthropological.

aes-Agricultural experiment station

agr-agrostology (Division of)

Am-America, American.

an-annual.

axy=axillary, occurring in an axil.

B=Bulletin.

Bibliographical words:—ac-academy;

an-nals; biol-ogy; bot-any; des-

cription; enc-yclopaedia; fl-ora;

gard-en; gaz-ette; gen-era; hort-

iculture; mag-azine; mon-ograph;

mus-eum; nat-ional; nat-ural; pl-

antae; pr-oceedings; qr-quarterly;

rev-iew; sci-ence; ser-ies; sp-ecies;

syn-opsis; t-abula (picture, plate);

tr-ansactions.

bien-nial, requiring two years to attain maturity, then dying.

Cam=Campeche.

cap=capsule.

Chis=Chiapas.

Chih=Chihuahua.

cir-cular.

CNH, contributions from the U. S. National Herbarium. . . . .

Coah=Coahuila.

Col=Colima.

com=common, commonly, usually.

Co: County.

Da: Alvah A. Davidson, Plants of L A Co.

D-A-U. S. Department of Agriculture.

d=described or description.

DF=Distrito Federal (Federal District).

Dgo=Durango.

diam-eter.

f—Figure.

FCM=Field Columbian Museum.

fdr=first published &amp; reprinted.

glab=Glabrous, smooth, not hairy.

glau=glaucous, covered with a bloom.

Gro=Guerrero.

Gto=Guanajuato.

Hgo=Hidalgo.

hi=high.

Jal=Jalisco.

lg=long.

mem=membranaceous, thin and soft,

like a membrane.

Micho=Michoacan.

Mor=Morelos.

nar=narrow.

NL=Nuevo Leon.

num=numerous.

O, none or wanting.

Oax=Oaxaca.

opp-osite, on opposite sides of the stem, in pairs.

pap=pappus, the bristles, scales, etc., at the apex of the akenes in the Compositae.

per-ennial, living year after year.

pr-proceedings.

Pue=Puebla.

QR.=Quintaano Roo.

Quintin: San Quintin bay, Baja.

R=Report.

sc=society.

seg=segment, a subdivision or lobe.

sh=short.

Sin=Sinaloa.

SLP=San Luis Potosi.

sm=small.

Son=Sonora.

spi = spines

sr=Series.

Tab=Tabasco.

Tam=Tamaulipas.

Tep=Tepic. (Territory).

Tlax=Tlaxcala.

U=university.

VC=Vera Cruz.

W=West American Scientist.

Yuc=Yucatan.

Zac=Zacatecas.

Zo=Zoology, zoological.

°=feet. " = inches. " = lines.

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